

FIG. 1

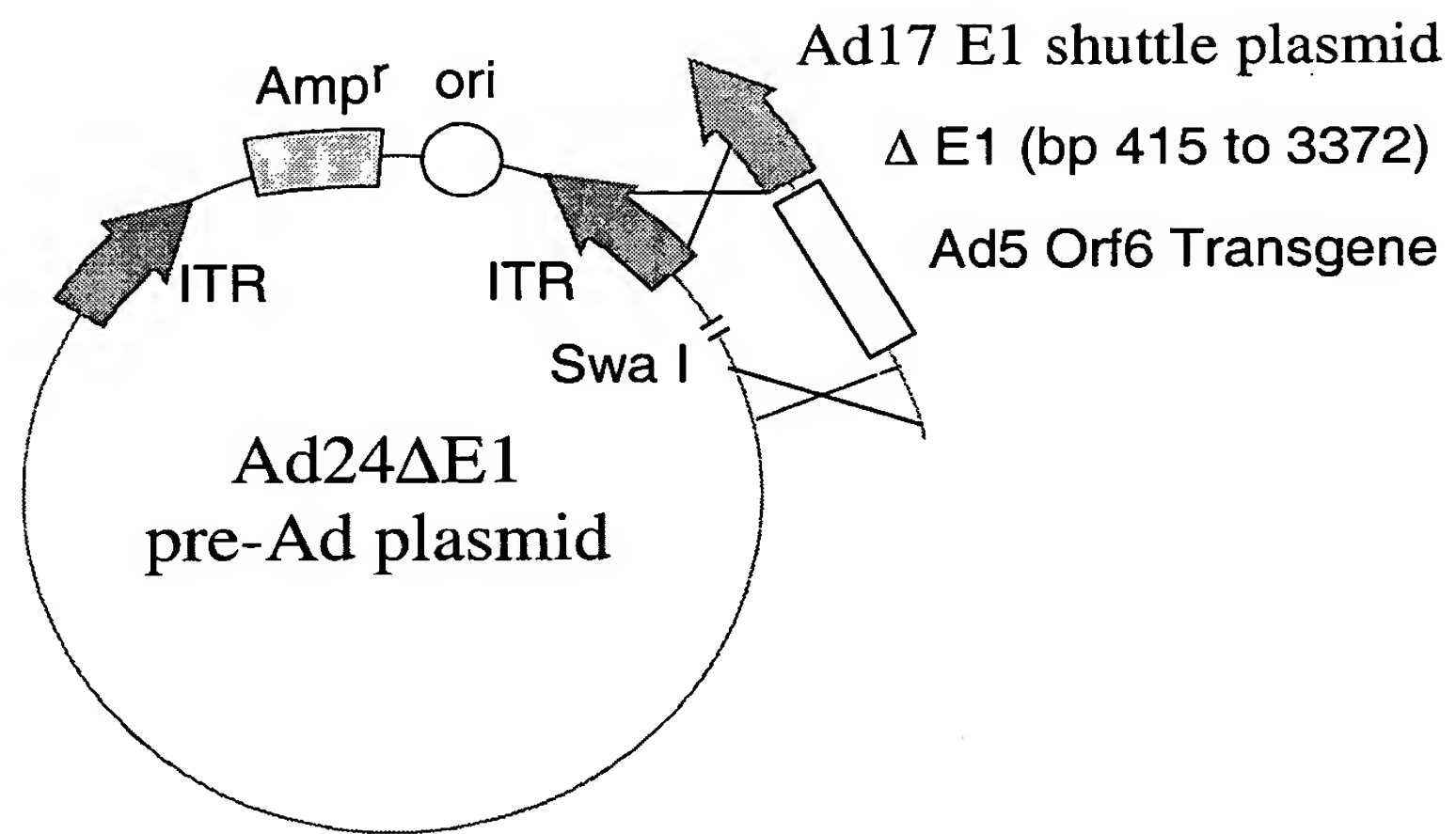


FIG. 2

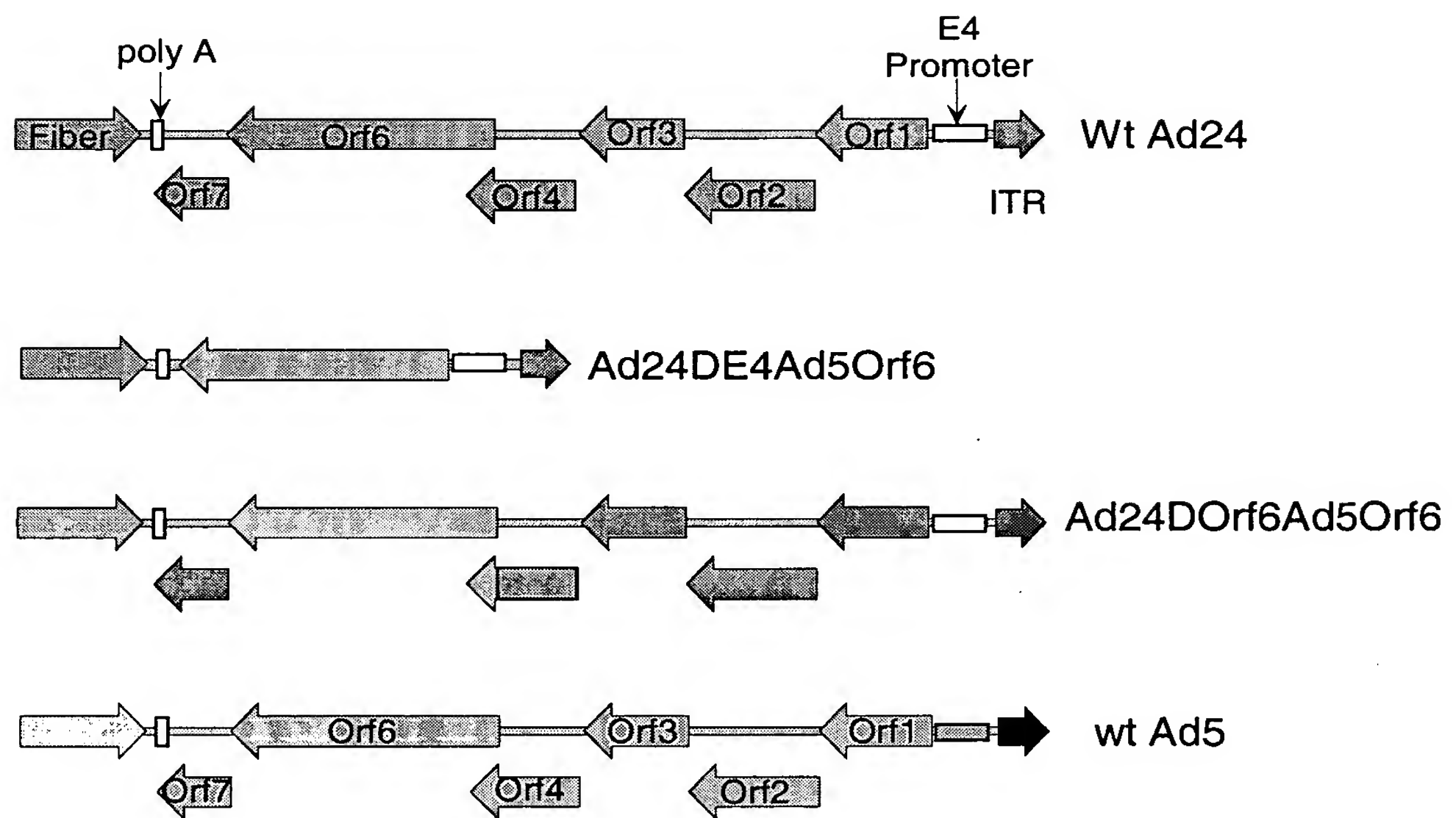


FIG. 3

Growth Curve Comparison of Ad24 Based Vectors

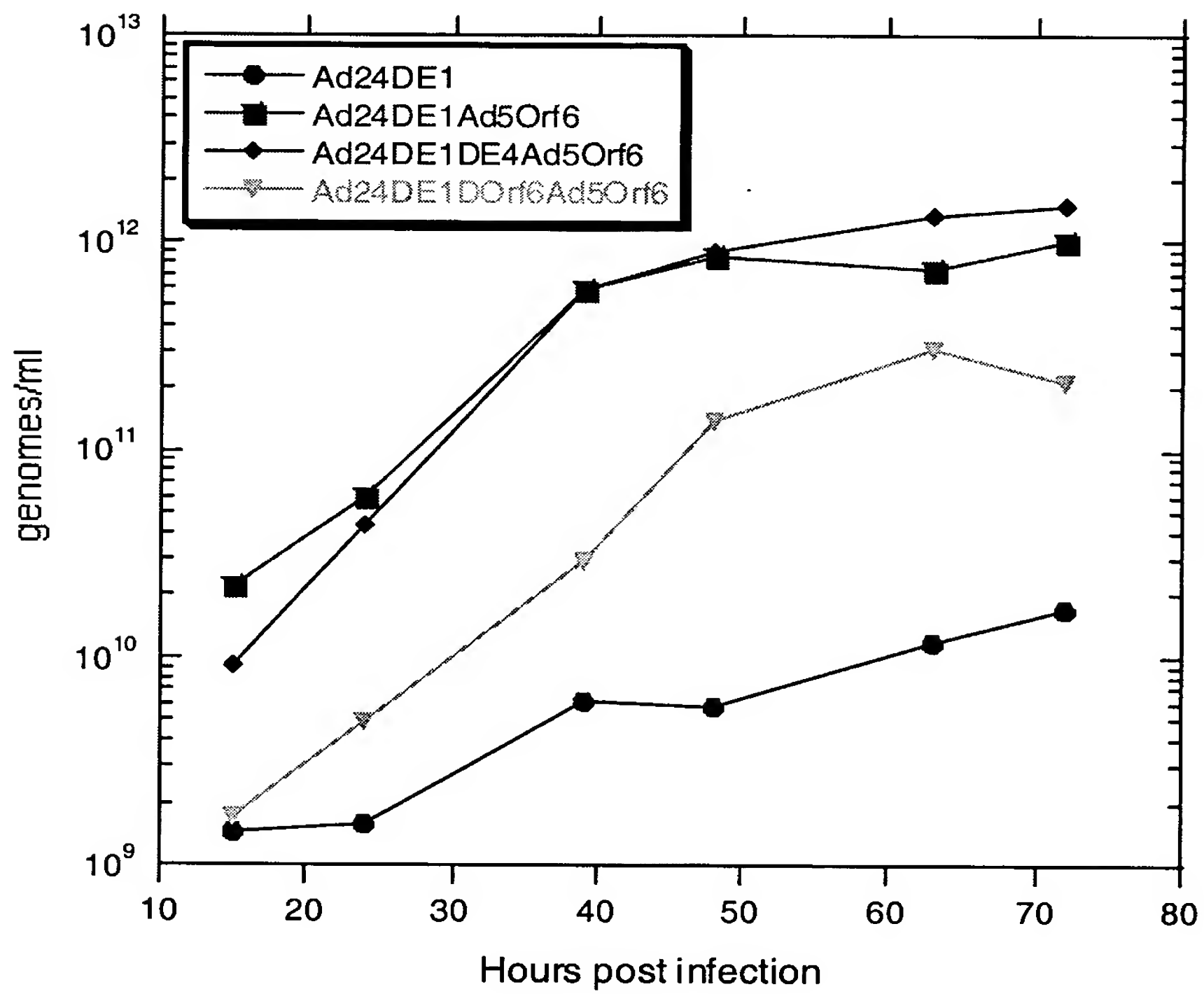


FIG. 4

1	catcatcaat	aatatacccc	acaaagtaaa	caaaagttaa	catgcaaata	agctttttgaa
61	tttagggcgg	ggccagcgct	gattggacga	gagaagatga	tgcaaatagac	gtcacgacgc
121	acggctaacg	gtcgccgcgg	aggcgtggcc	tagccccgaa	gcaagtcgcg	gggctgatga
181	cgtataaaaa	agcggacttt	agacccggaa	acggccgatt	ttcccgcggc	cacgcccgga
241	tatgaggtaa	ttctgggcgg	atgcaagtaa	aattaggtca	ttttggcgcg	aaaactgaat
301	gaggaagtga	aaagtgaaaa	ataccggtcc	cgcccagggc	ggaatatatta	ccgaggggccc
361	agagactttg	accgattacg	tgggggtttc	gattgcgggtg	ttttttcgcg	aatttccgcg
421	tccgtgtcaa	agtccggtgt	ttatgtcaca	gatcagctga	tccacagggt	atttaaacca
481	gtcgagcccc	tcaagaggcc	actcttgagt	gccagcgagt	agagatttct	ctgagctccg
541	ctcccagagt	ctgagaaaaa	tgagacacct	gcgcctcctt	tcttcaactg	tgccatttga
601	catggccgca	ttattgctgg	aggattatgt	gagtacaata	ttggaggacg	aactgcatcc
661	atctccatth	gagctgggac	ctacacttca	ggacctatat	gatttggagg	tagatgcccc
721	tgatgacgac	ccgaacgaag	aggctgtgaa	tttaatatth	ccagaatctc	tgattcttca
781	ggctgacata	gccagcgaag	ctgtacctac	accacttcat	acaccgactc	tgctacccat
841	acctgaattg	gaagaggagg	acgagctaga	cctccgatgt	tatgaggaag	gttttcctcc
901	cagcgattca	gaggacgaac	agggtagagca	gagcatggct	ctaactctca	aatatgcttg
961	tgtggttgtg	gaagagcatt	ttgtgttgga	caatcctgag	gtgcccgggc	aaggctgtag
1021	atcctgccag	taccaccggg	ataagaccgg	agacacgaac	gcctcctgcg	ctctgtgtta
1081	catgaaaaag	aacttcagct	ttattttacag	taagtggagt	gaatgtgaga	gagactgagt
1141	gcttaacaca	taactgggta	atgcttaaac	agctgtgcta	agtgtggtht	atthttgtth
1201	ctaggtccgg	tgtcagagga	tgagtcatca	ccctcagaag	aagaccaccc	gtgtccccct
1261	gagctgtcag	gcgaaacgcc	cctgcaagtg	cacagaccca	ccccagtcag	accagtgggc
1321	gagaggcgag	cagctgttga	aaaaattgag	gacttgttac	atgacatggg	tggggatgaa
1381	cctttggacc	tgagcttgaa	acgccccagg	aactaggctc	agctgtgctt	agtcatgtgt
1441	aaataaagtt	gtacaataaa	agtatatgtg	acgcatgcaa	ggtgtggtht	atgactcatg
1501	ggcgtggctt	agtcctatat	aagtggcaac	acctgggcac	tggggcacag	accttcaggg
1561	agttcctgat	ggatgtgtgg	actatccttg	cagactttag	caagacacgc	cggcttgtag
1621	aggatagttc	agacgggtgc	tccgggttct	ggagacactg	gtttggaact	cctctatctc
1681	gtctgggtga	cacagttaag	aaggattata	acgaggaatt	tgaaaatctt	tttgctgatt
1741	gctctggcct	gctagattct	ctaaatctcg	gccaccagtc	ccttttccag	gaaagggtac
1801	tccacagcct	tgatttttca	agcccagggc	gcactacagc	cgggggttgct	tttggtgtht
1861	ttctgggtga	caaatggagc	cagaacaccc	aactgagcag	gggctacatt	ctggacttcg
1921	cagccatgca	cctgtggagg	gcatgggtga	ggcagcgggg	acagagaatc	ttgaactact
1981	ggcttatata	gccagcagct	ccgggtcttc	ttcgtctaca	cagacaaaac	tccatgttgg
2041	aggaagaaat	gaggcaggcc	atggacgaga	acccgaggag	cggcctggac	cctccgtcgg
2101	aagaggagct	ggattgaatc	aggtatccag	cctgtaccca	gagcttagca	gggtgctgac
2161	atccatggcc	aggggagtg	agagggagag	gagcgatggg	ggcaataacc	ggatgatgac
2221	cgagctgacg	gccagcctga	tgaatcgcaa	gcgtccagag	cgcattacct	ggcacgagct
2281	acagatggag	tgtagggatg	aggtgggcct	gatgcaggat	aaatatggcc	tggagcagat
2341	aaaaacccac	tggttgaacc	cagatgagga	ttgggaggag	gccattaaga	aatatgccaa
2401	gatagccctg	cgcccagatt	gcaagtacag	ggtgaccaag	acggtgaata	tcagacatgc
2461	ctgctacatc	tcggggaacg	gggcagagggt	ggtcatcgat	accctggaca	aggccgcctt
2521	caggtgttgc	atgatgggaa	tgagagccgg	agtgatgaat	atgaattcca	tgattttcat
2581	gaacatgaag	ttcaatggag	agaagtthaa	tgggggtgat	ttcatggcca	acagtcacat
2641	gaccctgcac	ggctgcagtt	tcttcggctt	caacaatatg	tgcgagagag	tctggggcgc
2701	tgctaagatc	aggggatgta	agttttatgg	ctgctggatg	ggcgtggctg	gaagacccaa
2761	gagcgagatg	tctgtgaagc	agtgtgtgth	tgagaaatgc	tacctgggag	tctctaccga
2821	gggcaatgct	agagtgaagc	attgctcttc	cctggagacg	ggctgcttct	gcctgggtga
2881	gggcacagcc	tctctgaagc	ataatatggt	gaagggctgc	acggatgagc	gcatgtacaa
2941	catgctgaca	tgcgactcgg	gggtctgcca	tatcctgaag	aacatccatg	tgacctccca
3001	cccccggaag	aagtggccag	tgthtgagaa	taacctactg	atcaagtgcc	acatgcacct
3061	gggcgcccaga	aggggcacct	tccagccgta	ccagtgcac	tttagccaga	ccaagtgtct
3121	gctggagaa	gatgccttct	ccaggggtga	cctgaacggc	atctttgaca	tggatgtctc
3181	ggtgtacaag	atcctgagat	acgatgagac	caagtccagg	gtgcgcgctt	gcgagtgcgg
3241	gggcagacac	accaggatgc	aaccagtggc	cctggatgtg	accgaggagc	tgaggcccga
3301	ccacctgggtg	atggcttgta	ccgggaccga	gttcagctcc	agtggggagg	acacagatta
3361	gaggtaggth	gagtattagt	gggcgtggct	aaggtgacta	taaaggcggg	tgtcttacga
3421	gggtctthth	gctthtctgc	agacatcatg	aacgggactg	gcggggcctt	cgaagggggg
3481	ctththtagcc	cttatttgac	aaccgcctg	ccgggatggg	ccggagtctg	tcagaatgtg
3541	atgggatcga	cggtaggacg	gcgtccagtg	cttccagcaa	attcctcgac	catgacctac
3601	gcgaccgtgg	ggaactcgth	gctcgacagc	accgccgcag	ccgcggcagc	cgcagccgcc

FIG. 5A-1

3661	atgacagcga	cgagactggc	ttcgagctac	atgcccagca	gcagcagtag	cccctctgtg
3721	cccagttcca	tcatcgccga	ggagaaactg	ctggccctgc	tggccgagct	ggaagccctg
3781	agccgccagc	tggccgccct	gacccagcag	gtgtccgagc	tccgcgaaca	gcagcagcag
3841	caaaataaat	gattcaataa	acacagattc	tgattcaaac	agcaaagcat	ctttattatt
3901	tatttttttcg	cgcgcggtag	gccctgggtcc	acctctccccg	atcattgaga	gtgcggtgga
3961	ttttttccag	gacccggtag	aggtgggatt	ggatgttgag	gtacatgggc	atgagcccgt
4021	cccgggggtg	gaggtagcac	cactgcatgg	cctcgtgctc	tggggtcgtg	ttgtagatga
4081	tccagtcata	gcagggggcg	tgggcgtggt	gctggatgat	gtccttgagg	aggagactga
4141	tggccacggg	gagccccttg	gtgtaggtgt	tggcgaagcg	gttgagctgg	gagggatgca
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4261	gatcccgct	ggggttcattg	ttgtgcagga	ccaccagaac	ggtgtagccc	gtgcacttgg
4321	ggaacttgtc	atgcaacttg	gaagggaatg	cgtgaaagaa	tttgagagacg	cccttgtgcc
4381	cacccaggtt	ttccatgcac	tcatccatga	tgatggcgat	gggcccgtgg	gctgcggctt
4441	tggcaaagac	gtttctgggg	tcagagacat	cgtaattatg	ctcctgggtg	agatcatcat
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4621	ggatcatgtc	cacctgcggg	gcatgaaaa	aaacggtttc	cggggcgggg	gtgatgagct
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4741	ccccgatgac	gggttgcagg	tggtagttca	aggacatgca	gctgccgtcg	tcccgaggga
4801	ggggggccac	ctcgttgagc	atgtctctga	cttgagggtt	ttcccggacg	agctcgccga
4861	ggaggcggtc	cccggccagc	gagagcagct	cttgaggga	agcaaagttt	ttcaggggct
4921	tgagcccgtc	ggccatgggc	atcttggcga	gggtctgcga	gaggagtctg	aggcggtccc
4981	agagctcggg	gacgtgctct	acggcatctc	gatccagcag	acttcctcgt	ttcgggggtt
5041	gggacgactg	cgactgtagg	gcacgagacg	atgggcgtcc	agcgctgcca	gcgtcatgtc
5101	cttccagggt	ctcagtgtcc	gcgtgagcgt	ggtctccgtc	acggtgaagg	ggtgggcccc
5161	gggctgtgcg	cttgcaaggg	tgcgcttgag	actcatcctg	ctggtgctga	aacgggcacg
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5581	gggcctgtcc	tgcagggggc	tcccgcggtc	ctcctcgtag	agaaactcgg	accactctga
5641	gacgaaggcg	cgcgtccacg	ccaagacaaa	ggaggccacg	tgcgaggggt	agcggtcgtt
5701	gtccaccagg	gggtccacct	tttccacggg	atgcagacac	atgtccccct	cctccgcac
5761	caagaagggtg	attggcttgt	aggtgtaggg	cacgtgaccc	ggggtccccg	acgggggggt
5821	ataaaagggg	gcgggtctgt	gctcgtcctc	actctcttcc	gcgtcgtgtg	ccacgagcgc
5881	cagctgttgg	ggtaggtatt	ccctttcgag	agcgggcatg	acctcggcac	tcaggttgtc
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6121	gtcggctcgc	tccttggccg	cgatgttgag	ctggacatac	tcgcgcgcga	cgcacttcca
6181	ttcggggaag	acgggtggtgc	gctcgtcggg	cacgatcctg	acgcgccagc	cgcggttatg
6241	cagggtgacc	agatccacgc	tgggtggccac	ctcgccgcgc	aggggctcgt	tgggtccagca
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6481	gttgaggggc	ggaccccagg	gcatgggatg	cgtcagggcg	gaggcgtaca	tgccgcagat
6541	gtcgtagaca	tagatgggct	ccgagaggat	gccgatgtag	gtgggataac	agcgcctccc
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6661	gagattgggtg	cgctggggct	gctcggcgcg	gaagacgatc	tggcgaaaga	tggcatgcga
6721	gttgaggagg	atgggtgggccc	gttggaagat	gttaaagtgg	gcatgaggca	gacgaaccga
6781	gtcgcggatg	aagtgcgcgt	aggagtcttg	cagcttggcg	acgagctcgg	cgggtgacgag
6841	gacgtccatg	gcgcagtagt	ccagcgtttc	gcggatgatg	tcataaccgg	cctctccttt
6901	cttctcccat	agctcgcggg	tgagggcgta	ctcctcgtca	tccttccagt	actcccggag
6961	cgggaatect	cgatcgtccg	cacggtaaga	gcccagcatg	tagaaatggg	tcacggcctt
7021	gtagggacag	cagcccttct	ccacgggggag	ggcgtaagct	tgagcggcct	tgcggagcga
7081	ggtgtgcgtc	agggcgaagg	tatccctgac	catgactttc	aagaactggg	acttgaaatc
7141	cgagtcgtcg	cagccgcccgt	gctcccagag	ctcgaaatcg	gtgcgcttct	tcgagagggg
7201	gttaggcaga	gcgaaagtga	cgtcattgaa	gagaatcttg	cctgcccgcg	gcatgaaatt
7261	gcgggtgatg	cggaaagggc	ccgggacgga	ggctcgggtg	ttgatgacct	gggcggcgag

FIG. 5A-2

7321	gacgatctcg	tcgaagccgt	tgatgttgtg	cccgaacgatg	tagagttcca	tgaatcgcgg
7381	gcggccttta	atgtgcggca	gcttttttgag	ctcctcgtag	gtgaggtcct	cggggcaatg
7441	cagtccgtgc	tgctcgagcg	cccactcctg	gagatgtggg	ttggcttgca	tgaatgaagc
7501	ccagagctcg	cgggccataa	gggtctggag	ctcgtcgcga	aagaggcgga	actgctggcc
7561	cacggccatc	ttttctgggg	tgacgcagta	gaaagtaagg	gggtcccgt	cccagcgatc
7621	ccagcgtaag	cgcacggcta	gatcgcgagc	gagggcgacc	agctctgggt	cccccgagaa
7681	tttcataacc	agcataaagg	ggacgagctg	cttgccgaag	gaccccatcc	aggtgtaggt
7741	ttctacatcg	taggtgacaa	agagccgctc	cgtgcgagga	tgagagccga	ttgggaagaa
7801	ctggatttcc	tgccaccagt	tggacgagtg	gctgttgatg	tgatgaaagt	agaaatcccg
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7921	cacgggctgt	acctcatcca	cgagatacac	agcgcgtccc	ttgaggagga	acttcaggag
7981	tggcggccct	ggctgggtgg	tttcatgttc	gcctgcgtgg	gactcaccct	ggggctcctc
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8161	gtccggggggc	agggttctga	ggttgacctc	gtagaggcgg	gtgagggcgt	gcttgagatg
8221	cagatggtac	ttgatctcca	cgggtgagtt	ggtggctgtg	tccacgcatt	gcatgagccc
8281	gtagctgcgc	ggggccacga	ccgtgccgcg	gtgcgctttt	agaagcgggtg	tcgcggacgc
8341	gctcccggcg	gcagcggcgg	ttccggcccc	gcgggcaggg	gcggcagagg	cacgtcggcg
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8461	cggttgacat	cctggatctg	ccgcctctgc	gtgaagacca	ccggccccgt	gactttgaac
8521	ctgaaagaca	gttcaacaga	atcaatctcg	gcgtcattga	cggcggcctg	acgcaggatc
8581	tcttgacagt	cgcccagagt	gtcctggtag	gcgatctcgg	acatgaactg	ctcgatctcc
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8701	cgacccatga	gctgcgagaa	ggcgcccagg	ccgctctcat	tccagacgcg	gctgtagacc
8761	acgtccccgt	cggcgtcgcg	cgcgcgcatg	accacctgcg	cgaggttgag	ctccacgtgc
8821	cgcgtgaaga	cggcgtagtt	gcgcaggcgc	tggaagaggt	agtttagggg	ggtggcgatg
8881	tgctcgggtga	cgaagaagta	catgatccag	cggcgagggg	gcacctcgcg	gatgtcgccg
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9241	tcggtgacgg	cgcgaccccc	ttcgcgagga	cgcagcgtga	agacgccgcc	ggtcatctcc
9301	cggtaatggg	gcgggtcccc	ggtgggcagc	gagagggcgc	tgacgatgca	tcttatcaat
9361	tgcggtgtag	gggacgtgag	cgcgctcgaga	tcgaccggat	cggagaatct	ttcgaggaaa
9421	gcgtctagcc	aatcgacagc	gcaaggtaag	ctcaaacacg	tagcagccct	gtggacgctg
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9541	gcgaggagga	ccaggtcctt	gggtcccgt	tgctggatgc	gaagccgctc	ggccatgccc
9601	caggcctggc	cctgacaccg	gctcaggttc	ttgtagtagt	catgcatgag	cctctcaatg
9661	tcatactgg	cggaggcgga	gtcttccatg	cgggtgaccc	cgacgccctt	gagcggctgc
9721	acgagcgcca	ggtcggcgac	gacgcgctcg	gcgaggatgg	cctgttgcac	gcgggtgagg
9781	gtgtcctgga	agtcgtccat	gtcgacgaag	cgggtgtagg	ccccggtggt	gatggtgtag
9841	gtgcagttgg	ccatgagcga	ccagttgacg	gtctgcaggc	cgggttgcac	gacctctgag
9901	tacctgagcc	gcgagaaggc	gcgcgagtcg	aagacatagt	cgttgacagg	gcgcacgagg
9961	tactgggtatc	caactaggaa	gtgcggcggc	ggctggcggt	agagcggcca	gcgctgggtg
10021	gccggcgcg	ccggggccag	gtcctcgagc	atgaggcggt	ggtagccgta	gaggtagcgg
10081	gacatccagg	tgatgccggc	ggcggtgggtg	gagggcgcg	ggaactcgcg	gacgcgggtc
10141	cagatgttgc	gcagcggcag	gaaatagtc	atggtcggca	cggctctggc	ggtgagacgc
10201	gcgcagtcac	tgacgctcta	gaggcaaaaa	cgaaagcgg	tgagcgggct	cttctccgt
10261	agcctggcgg	aacgcaaacg	ggttaggccc	cgtgtgtacc	ccggttcgag	ttccctcgaa
10321	tcaggctgga	gccgcgacta	acgtggtatt	ggcactccc	tctcgacccg	agcccgatag
10381	ccgccaggat	acggcggaga	gccctttttg	ccgaccgagg	ggagtcgcta	gacttgaaag
10441	cggccgaaaa	ccccgcggg	tagtggtcgc	cgcccgtagt	ctggagaagc	tttgccaggg
10501	ttgagtcgcg	gcagaacccg	gttcgcggac	ggccgcggcg	agcgggactt	ggtcaccccc
10561	ccgatttaaa	gacccacagc	cagccgactt	ctccagttac	gggagcgagc	cccctttttt
10621	cttttttgcca	gatgcacccc	gtcctgcgcc	aaatgcgtcc	cacccccctt	ccggcgacca
10681	ccgcgaccgc	ggccgtagca	ggcgccggcg	ctgtagcccc	gccacagcag	acagagatgg
10741	acttggaaga	gggcaaggga	ctggcgagac	tgggggcgc	gtccccggag	cgacaccccc
10801	gcgtgcagct	gcagaaggac	gtgcgcccgc	cgtacgtgcc	tgcgcagaac	ctgttcaggg
10861	accgcagcgg	ggaggagccc	gaggagatgc	gcgactgccg	ttttcggggc	ggcagggagc
10921	tgcgcgaggg	cctggaccgc	cagcgcgtgc	tgcgcgacga	ggatttcgag	ccgaacgagc

FIG. 5A-3

10981	agacggggat	cagccccgcg	cgcgcgacg	tggcggcg	caacctggtg	acggcctacg
11041	agcagacggt	gaagcaggag	cgcaacttcc	aaaagagttt	caacaacccat	gtgcgcacgc
11101	taatcgcgcg	cgaggaggtg	gccctgggct	tgatgcacct	gtgggacctg	gcggaggcca
11161	tcgtgcagaa	cccggacagc	aagcctctga	cggcgcagct	gttcctggtg	gtgcagcaca
11221	gcagggacaa	cgaggcggtc	agggaggcgc	tgctaaacat	cgccgagccc	gagggccgct
11281	ggctgctgga	gctgatcaac	atcttgacga	gcatcgtagt	gcaggagcgc	agcctgagcc
11341	tggccgagaa	ggtggcggtc	atcaactact	cggtgctgag	cctgggcaag	ttttacgcgc
11401	gcaagattta	caagacgccg	tacgtgcca	tagacaagga	ggtgaagata	gacagctttt
11461	acatgcgcat	ggcgctcaag	gtgctgacgc	tgagcgacga	cctgggcggtg	taccgcaacg
11521	accgcatcca	caaggccgtg	agcgcgagcc	ggcggcgcg	gctgagcgac	cgcgagctga
11581	tgctgagtct	gcgcccggcg	ctggtagggg	gcgcccggcg	cggtgaggag	tcctacttcg
11641	acatgggggc	ggacctgcat	tggcagccga	gccggcgcg	cttggaggcc	gcctacggtc
11701	cagaggactt	ggatgaggat	gaggaagagg	aggaggatgc	acccgctgcg	gggtactgac
11761	gcctccgtga	tgtgttttta	gatgcagcaa	gccccggacc	ccgccataag	ggcggcgctg
11821	caaagccagc	cgtccggtct	agcatcggac	gactgggagg	ccgcgatgca	acgcatcatg
11881	gccctgacga	cccgaaccc	cgagtccttt	agacaacagc	cgcaggccaa	cagactctcg
11941	gccattctgg	aggcgggtgt	cccctctcgg	accaacccca	cgcacgagaa	ggtgctggcg
12001	atcgtgaacg	cgctggcgga	gaacaaggcc	atccgtccc	acgaggccgg	gctggtgtac
12061	aacgccctgc	tggagcgcg	gggcccgtac	aacagcacia	acgtgcagtc	caacctggac
12121	cggctggtga	cggacgtgcg	cgaggccgtg	gcgcagcgcg	agcgggtcaa	gaacgagggc
12181	ctgggctcgt	tgggtggcgt	gaacgccttc	ctggcgacgc	agccggcgaa	cgtgccgcgc
12241	gggcaggacg	attacaccaa	ctttatcagc	gcgctgcggc	tgatggtgac	cgagggtgcc
12301	cagagcgagg	tgtaccagtc	gggcccagac	tactttttcc	agacgagccg	gcagggtctg
12361	cagacggtga	acctaagcca	ggctttcaag	aatctgcgcg	ggctgtgggg	cgtgcaggcg
12421	cccgtgggcg	accggtcgac	ggtgagcagc	ttgctaacgc	ccaactcgcg	gctgctgctg
12481	ctgctgatcg	cgcccttcac	cgacagcggc	agcgtgaacc	gcaactcgta	cctggggccac
12541	ctgctgacgc	tttaccgcga	ggccataggg	caggcgaggg	tggacgagca	gaccttccag
12601	gagatcacta	gcgtgagccg	cgcgctgggt	cagaacgaca	ccgacagtct	gagagccacc
12661	ctgaacttct	tgctgacaaa	tagacagcag	aagattccgg	cgcagtacgc	gctgtcggcc
12721	gaggaggagc	gcatcctgag	atatgtgcag	cagagcgtag	ggcttttctt	gatgcaggag
12781	ggggccaccc	ccagcgccgc	gctggacatg	accgcgcgca	acatggaacc	tagcatgtac
12841	gccgccaacc	ggccgttcat	caataagctg	atggactacc	tgcaccgcgc	ggctgccatg
12901	aactcggact	actttactaa	tgctatacta	aaccgcact	ggctcccgc	gccgggggtc
12961	tacacgggcg	agtacgacat	gcccgaaccc	aacgatgggt	tcctgtggga	cgacgtggac
13021	agcgcggtgt	tctccccgac	cttgcaaaa	cgccaggagg	cggtagcgac	gcccgcgagc
13081	gagggcgcg	tgggtcggag	cccctttcct	agcttagggg	gtttgcatag	cttgccgggc
13141	tcggtgaaca	gcggcagggt	gagccggccg	cgcttgctgg	gcgaggacga	gtacctgaac
13201	gactcgctgc	tgacgcccgc	gcgggtcaag	aacgccatgg	ccaataacgg	gatagagagt
13261	ctggtggaca	aactgaaccg	ctggaagacc	tacgctcagg	accataggga	tgcgcccgcg
13321	ccgcggcgac	agcgccacga	ccggcagcgg	ggcctgggtg	gggacgacga	ggactcggcc
13381	gacgatagca	gcgtgttgga	cttgggcggg	agcgggtggg	ccaacccgtt	cgcgcacctg
13441	cagcccagac	tggggcgacg	gatgttttga	atgaaataaa	actaccaag	gccatagcgt
13501	gcgttctctt	ccttggttaga	gatgaggcgc	gcgggtgggt	cttcctctcc	tcctccctcg
13561	tacgagagcg	tgatggcgca	ggcaaccctg	gaggttccgt	ttgtgcctcc	gcggtatatg
13621	gctcctacgg	agggcagaaa	cagcattcgt	tactcggaac	tggctccgca	gtacgacacc
13681	actcgcggtg	acttggtgga	caacaagtcg	gcggacatcg	cttccttgaa	ctaccaaacc
13741	gaccacagca	acttcctgac	cacgggtggg	cagaacaacg	atttcacccc	cgccgaggcc
13801	agcacgcaga	cgataaattt	tgacgagcgg	tcgcgggtgg	gcgggtgattt	gaagaccatt
13861	ctgcacacca	acatgcccga	tgtgaacgag	tacatgttca	ccagcaagtt	taaggcgcg
13921	gtgatggtgg	ctaggaaggt	ggtagatcag	aatgatagga	gcaaggatga	gttaaaatat
13981	gagtgggttg	agttttaccct	gcccgagggc	aacttttccg	agaccatgac	catagacctg
14041	atgaacaacg	ccatcttgga	aaactacttg	caagtggggc	ggcaaaatgg	cgtgctggag
14101	agcgatatcg	gagtcaagtt	tgacagcagg	aattttcaagc	tgggctggga	cccggtaacc
14161	aagctggtga	tgcttggggg	ctacacctac	gaggccttcc	acccggacgt	tgtgctgctg
14221	ccgggctgcg	gggtggactt	caccgagagc	cgcctgagca	acctcctggg	cattcgcaag
14281	aagcaacctt	tccaagaggg	cttcaggatc	atgtatgagg	atctcgaggg	tggtaacatc
14341	cccggcctcc	tggatgtcaa	gcaatatattg	gatagtaaaa	agaagcttga	ggaggcaaca
14401	cagaatgcaa	ccagggtcgc	tggagatatc	agaggagaca	gtcatattcc	aagagctgtg
14461	gaacaagcgg	ctgaaaagga	tctgggtcatt	gtaccagtaa	cacaagatga	aagtaagaga
14521	agctataatg	tcatagatgg	cacccatgac	accctctacc	gaagttggta	cctgtcctat
14581	acctacgggg	accccgagaa	gggggtgcag	tcgtggacgc	tgctcaccac	cccggacgtc

FIG. 5A-4

14641	acctgcgggcg	cggagcaagt	ctactgggtcg	ctgccgggacc	tcatgcaaga	ccccgtcacc
14701	ttccgctcta	cccagcaagt	cagcaactac	cccgtgggttg	gcgccgagct	catgcccttc
14761	cgcgccaaga	gctttttacaa	cgacctcgcc	gtctactccc	agctcatccg	cagctacacc
14821	tccctcaccc	acgtcttcaa	ccgcttcccc	gacaaccaga	tcctctgccg	tccgcccgcg
14881	cccaccatca	ccacgggtcag	tgaaaacgtg	cctgctctca	cagatcacgg	gacgctaccg
14941	ctgcgcagca	gtatccgcgg	agtccagcga	gtgaccgtca	ctgacgcccc	tgcgcgcacc
15001	tgtccctacg	tctacaaggc	cctggggcata	gtcgcgcgcg	gcgtgctttc	cagtgcgcacc
15061	ttctaaaaaa	tgtctattct	catctcgcgc	agcaataaca	ccggctgggg	tcttactagg
15121	cccagcacca	tgtacggagg	agccaagaag	cgctcccagc	agcaccctgt	ccgcgtccgc
15181	ggccacttcc	gcgctccctg	gggcgcttac	aagcgcgggc	ggacttctac	cgccgcctgt
15241	cgcaccaccg	tcgacgacgt	catcgactcg	gtgggtcgccg	acgcgcgcaa	ctataccccc
15301	gccccctcca	ccgtggacgc	ggtcatcgac	agcgtgggtg	ccgacgcgcg	cgactatgcc
15361	agacgcaaga	gccggcgggcg	acggatcgcc	aggcgccacc	ggagtacgcc	cgccatgcgc
15421	gccgcccggg	ctctgctgcg	ccgcgcgcaga	cgcacggggc	gccggggccat	gatgcgagcc
15481	gcgcgcgcgc	ccgccactgc	accccccgca	ggcaggactc	gcagacgagc	ggccgcgcgc
15541	gctgccgcgc	ccatttctag	catgaccaga	cccaggcgcg	gaaacgtgta	ctgggtgcgc
15601	gactccgtca	cgggcgtgcg	cgtgcccggt	cgcaccctgc	ctcctcgtcc	ctgatctaata
15661	gcttgtgtcc	tcccccgcaa	gcgacgatgt	caaagcgcaa	aatcaaggag	gagatgctcc
15721	aggctcgtcg	cccggagatt	tacggaccac	cccaggcgga	ccagaaaccc	cgcaaaatca
15781	agcgggttaa	aaaaaaggat	gaggtggacg	agggggcagc	agagtgtgtg	cgcgagttcg
15841	ctccgcggcg	gcgcgtaaat	tggaaagggc	gcagggtgca	gcgcgtgttg	cggcccggca
15901	cggcggttgt	gtttacgccc	ggcgagcggt	cctcgggtcag	gagcaagcgt	agctatgacg
15961	agggtgtacg	cgacgacgac	atcctggacc	aggcgggcga	gcgggcgggc	gagttcgcct
16021	acgggaagcg	gtcgcgcgaa	gaggagctga	tctcgttgcc	gctggacgag	agcaacccca
16081	cgcctagcct	gaagcccgtg	accctgcagc	agggtgctgc	ccaagcagtg	ctgctgccga
16141	gccgcggggg	caagcgcgag	ggcgagaata	tgtacccgac	catgcagatc	atgggtgccca
16201	agcgcggggc	cgtggaagaa	gtgctggaca	ccgtgaaaat	ggatgtggag	cccgaggtca
16261	agggtgcgcc	catcaagcag	gtggcgcccg	gcctggggcgt	gcagaccgtg	gacattcaga
16321	tccccaccga	catggatgtt	gacaaaaaac	cctcgaccag	catcgaggtg	cagaccgacc
16381	cctgggtccc	agcctccacc	gctgcgcgtc	ccacttctac	cgcgcgccac	gctaccgagc
16441	ctcccagaag	gcgaagatgg	ggccctgcca	accggctgat	gcccactac	gtattgcac
16501	cttccattat	cccgaacgcc	ggctatcgcg	gcacccggta	ctacgccagc	cgcaggcgcc
16561	cagccagcaa	acgccgcgcg	cgcaccgcca	cccgcgcgcg	tctggccccc	gcccgcgtgc
16621	gccgcgtaac	cacgcgcgcg	ggccgcctcg	tcgttctgcc	caccgtgcgc	taccacccca
16681	gcatecttta	atccgtgtgc	tgtgatactg	ttgcagagag	atggctctca	cttgccgcct
16741	gcgcaccccc	gtcccgaatt	accgaggaag	atcccgccgc	aggagaggca	tggcaggcag
16801	cggcctcaac	cgcgcgcggc	ggcgggccat	gcgcaggcgc	ctgagtggcg	gctttctgcc
16861	cgcgctcatc	cccataatcg	cggcgggccat	cggcacgac	ccgggcatag	cttccgttgc
16921	gctgcaggcg	tcgcagcgcc	gttgatgtgc	gaataaagcc	tcttttagact	ctgacacacc
16981	tggctcctgta	tattttttaga	atggaagaca	tcaattttgc	gtccctggct	ccgcggcacg
17041	gcacgcggcc	gttcatgggc	acctggaacg	agatcggcac	cagccagctg	aacggggggcg
17101	ccttcaattg	gagcagtgct	tggagcgggc	ttaaaaattt	cggctcgacg	ctccggacct
17161	atgggaacaa	ggcctggaat	agtagcacgg	ggcagttggt	aagggaagaa	ctcaaagacc
17221	agaacttcca	gcagaagggt	gtggacggcc	tagcctcggg	cattaacggg	gtggtggaca
17281	tagcaaacca	ggcctgtcag	cgcgagataa	acagccgcct	ggacccgcgg	ccgcccacgg
17341	tgggtggagat	ggaagatgca	actcctccgc	cgcaccaagg	cgagaagcgg	ccgcggcccc
17401	acgcggagga	gacgatcctg	caggtggacg	agccgccttc	gtacgaggag	gccgtcaagg
17461	ccggcatgcc	caccacgcgt	atcatcgcg	cactggccac	tgggtgtaat	aaacccgcca
17521	cccttgacct	gcctccgcca	cccacgcccc	ctccaccgaa	ggcagctccg	gttgtgcagc
17581	cccctcctgt	ggcgaccgcc	gtgcgcgcgc	tccccgcccc	ccgccaggcc	cagaactggc
17641	agagcacgct	gcacagtatc	gtgggcctgg	gagtgaagaa	tctgaagcgc	cgccgatgct
17701	attgagagag	aggaaagagg	acactaaagg	gagagcttaa	cttgatgtgt	ccttaccgcc
17761	agagaacgcg	cgaagatggc	tacccctcgc	atgatgccgc	agtgggcgta	catgcacatc
17821	gccgggcagg	acgcctcgga	gtacctgagc	ccgggtcttg	tgcagtttgc	ccgcgcacc
17881	gacacgtact	tcagcctggg	caacaagttt	aggaacccca	cgggtggctcc	caccacgat
17941	gtgaccacgg	accggtccca	gcgtctgacg	ctgcgctttg	tgcccgtgga	tgcgcaggac
18001	accacgtact	cgtacaaggc	gcgcttctac	ctggccgttg	gcgacaaccg	ggtgctagac
18061	atggccagca	cttactttga	catccgcggc	gtcctggacc	gcggtcccag	cttcaaacc
18121	tactcgggca	cggcttataa	cagcctggcc	cccaaaggcg	cccccaactc	tagtcagtg
18181	gaacaagcta	aagctaccaa	tgccgggtcaa	aaggaaactc	acacatttgg	agtagccgct
18241	atgggcggag	aagacattac	agtgaaggt	cttcaaattg	gaactgatga	aactaaggaa

FIG. 5A-5

18301	gatggagagg	atgaaatfff	tgcagatcaa	acattccagc	cagaacctca	agtgggagaa
18361	cagaactggc	aagaaacggt	tgttttctat	ggaggcagag	ctcttaagaa	agaaaccaa
18421	atgaagccat	gttatggctc	ttatgcgaga	cccacaaatg	aaaaggagg	acaggctaaa
18481	tttacacttg	atgaaaaagg	tcagccaacc	aaaattcctg	atattacaat	ggatttcttt
18541	gatagtccac	aagatgatac	atcaggtgta	actaataagc	cagatattgt	catgtatgca
18601	gaaaatgtaa	atrtagaagc	tcctgacaca	catgtagttt	acaaaccagg	caaagatgat
18661	tctagttctt	ccgctaacct	cacacaacag	gccatgccta	acagaccgaa	ctacatcggg
18721	ttcagagaca	actttgtggg	tcttatgtac	tacaatagta	ctggcaacat	gggtgtgctg
18781	gctggtcagg	cctctcagtt	gaatgctgtg	gtcgacttgc	aagacagaaa	caccgagctg
18841	tcttaccagc	tattgctaga	ttctctgggt	gacagaacca	gatactttag	catgtggaat
18901	tctgcagtgg	acagctatga	ccccgatgtc	aggatcattg	agaatcacgg	tgtggaagat
18961	gaacttccaa	actattgctt	cccactgaat	ggcagtgggt	ctaacagcac	atacaaaggt
19021	gttaaagctg	gaactggaaa	caattgggat	gacgatgaaa	atgttgcaag	acaaaatcag
19081	attggcactg	gcaacctgtt	cgccatggag	atcaacctcc	aggccaacct	atggaagagt
19141	tttctgtact	cgaacgtggc	cctgtacctg	cccgactcct	acaagtacac	gccggccaac
19201	gtcacgctgc	ccaccaacac	caacacctac	gactacatga	acggccgcgt	ggtagcccc
19261	tcgctgggtg	acgcctacat	caacattggc	gcccgcgtgt	cgctggaccc	catggacaat
19321	gtcaatccct	tcaaccacca	ccgcaacgcg	ggcctgcgct	accgctccat	gctcctgggc
19381	aacggccgct	acgtgccctt	ccacatccaa	gtgccccaaa	agttctttgc	catcaagaac
19441	ctgcttctgc	tccccgggtc	ctacacctac	gagtggaaact	tccgcaagga	cgtaacatg
19501	atcctgcaga	gttcctctcg	caacgacctg	cgcgtcgacg	gcgcctccgt	ccgcttcgac
19561	agcgtcaacc	tctacgccac	cttcttcccc	atggcgcaca	acaccgcctc	caccctggaa
19621	gccatgctgc	gcaacgacac	caacgaccag	tccttcaacg	actacctctc	ggccgccaac
19681	atgctctacc	ccatcccggc	caaggccacc	aacgtgcccc	tctccatccc	ctcgcgcaac
19741	tgggcccgcct	tccgcggctg	gagtttcacc	cggctcaaga	ccaaggaaac	tccctccctc
19801	ggctcgggtt	tcgaccccta	ctttgtctac	tcgggctcca	tccctacct	cgacgggacc
19861	ttctacctca	accacacctt	caagaaggte	tccatcatgt	tcgactcctc	ggtcagctgg
19921	cccggcaacg	accggctgct	cacgccgaac	gagttcgaga	tcaagcgcag	cgttgacggg
19981	gagggctaca	acgtggccca	atgcaacatg	accaaggact	ggttcctcgt	ccagatgctc
20041	tcccactaca	acatcggcta	ccagggcttc	cacgtgcccg	agggctacaa	ggaccgcatg
20101	tactccttct	tccgcaactt	ccagcccatg	agcaggcagg	tggtcgatga	gatcaactac
20161	aaggactaca	aggccgtcac	cctacccttc	cagcacaaca	actcgggctt	caccggctac
20221	cttgcgccca	ccatgcgcca	ggggcagccc	taccccgcca	acttccccta	cccgtctatc
20281	ggctccaccg	cagttccctc	cgtcacccag	aaaaagttcc	tctgcgacag	ggtcatgtgg
20341	cgcaccccat	tctccagcaa	ctttatgtcc	atgggcgccc	tcaccgacct	gggtcagaac
20401	atgctctatg	ccaactcggc	ccacgcgctc	gacatgacct	ttgaggtgga	cccatggat
20461	gagcccaccc	tcctctatct	tctcttcgaa	gttttcgacg	tggtcagagt	gcaccagccg
20521	caccgcggcg	tcacgcaggc	cgtctacctg	cgcacgcctt	tctccgcggg	caacgctacc
20581	acttaagcat	gagcggctcc	agcgaacaag	agctcgcggc	catcgtgcgc	gacctgggat
20641	gcggggcccta	ctttttggga	acccacgaca	agcgttcccc	tggcttcctt	gccggcgaca
20701	agctggcctg	cgccatcgte	aacacggccg	gccgcgagac	cggaggcggtg	cactggctcg
20761	cctttggctg	gaatccgcgc	tcgcgcacct	gctacatgtt	cgaccccttt	gggttctcgg
20821	accgccggct	caagcagatt	tacagcttcg	agtacgagge	catgctgcgc	cgaagcgcgc
20881	ttgcctcctc	gcccgaaccg	tgtctcagcc	tcgagcagtc	caccagacc	gtgcaggggc
20941	ccgactccgc	cgcctgcgga	cttttttgtt	gcatgttttt	gcatgccttc	gtgcactggc
21001	ccgaccgacc	catggacgga	aaccccacca	tgaacttgct	gacgggggtg	ccaaacggca
21061	tgetacaatc	gccacagggtg	ctgcccaccc	tcaggcgcaa	ccaggaggag	ctctaccgct
21121	tcctcgcgcg	ccactccctt	tactttcgat	cccaccgcgc	cgccatcgaa	aacgccaccg
21181	cttttgataa	aatgaaacaa	ctgcgtgtat	ctcaataaac	agcactttat	tttacatgca
21241	ctggagtata	tgcaagttat	ttaaaagtcg	aaggggttct	cgcgctcgte	gttgtgcgcc
21301	gcgctgggga	gggccacggt	gcggtactgg	tacttgggaa	gccacttgaa	ctcggggatc
21361	accagtttgg	gcaactgggt	ctcggggaag	gtctcgtctc	acatgcgcgc	gctcatctgc
21421	agggcgccca	gcatgtccgg	gccggagatc	ttgaaatcac	aattggggcc	ggtgctctgc
21481	gcgcgcgagt	tgccggtacac	ggggttgacg	cactggaaca	ccattagact	ggggtacttc
21541	acactggcaa	gcacgctctt	gtcgtgatc	tgatccttgt	ccaggtcctc	ggcgttgctc
21601	aggccgaacg	gggtcatctt	gcacagctgg	cggcccagga	agggcacgct	ctgaggcttg
21661	tggttacact	cgcagtgcac	gggcatcagc	atcatccccg	cgcgcgctg	catattcggg
21721	tagagggcct	tgacgaaggc	cgtgatctgc	ttgaaagctt	gctgggcctt	agccccctcg
21781	ctgaaaaaca	ggccgcagct	cttcccgcga	aactgggttat	tcccgcaccc	ggcatcatgc
21841	acgcagcagc	gcgcgtcatg	gctggtcagt	tgcaccacgc	tacgtcccca	gcggttctgg
21901	gtcaccttgg	ccttgctggg	ctgctccttc	aacgcgcgct	gcccgttctc	gctgggtcaca

FIG. 5A-6

21961	tccatctcca	ccacgtggtc	cttgtggatc	atcacccgtcc	catgcagaca	cttgagctga
22021	ccctcgacat	cgcagcagcc	atgatcccac	agggcgcagc	cgggtgcactc	ccagttctta
22081	tgcgcgatcc	cgctgtggct	gaagatgtaa	ccttgcaaca	ggcgacccat	gacgggtgcta
22141	aatgctttct	gggtgggtgaa	ggtcagttgc	agaccgcggg	cctcctcggt	catccagggtc
22201	tggcacatct	tttgggaagat	ctcgggtctgc	tcgggcatga	gcttgtaagc	atcgcgagcag
22261	ccgctgtcga	cgcggtagcg	ttccatcagc	acgttcatgg	tatccatgcc	cttctcccag
22321	gacgagacca	gaggcagact	caggggggttg	cgcacgttca	ggacaccggg	ggtcgcaggc
22381	tcgacgatgc	gttttccgtc	cttgcccttc	ttcaacagaa	ccggaggctg	gctgaatccc
22441	actcccacga	ttacggcatc	ttcctggggc	atctcttcgt	cggggtctac	cttggtcaca
22501	tgcttgggtct	ttctgggttg	cttctttttt	ggagggctgt	ccacggggac	cacgtcctcc
22561	tcggaagacc	cggagcccac	ccgctgatac	tttcggcgct	tggtgggcag	aggaggtggt
22621	ggcggcgagg	ggctcctctc	ctgctccggc	ggatagcgcg	ccgacccgtg	gccccggggc
22681	ggagtggcct	ctcgtcccat	gaaccggcgc	acgtcctgac	tgccgccggc	cattgtttcc
22741	taggggaaga	tggaggagca	gccgcgtaag	caggagcagg	aggaggactt	aaccacccac
22801	gagcaaccca	aaatcgagca	ggacctgggc	ttcgaagagc	cggctcgtct	agaaccccca
22861	caggatgaac	aggagcacga	gcaagacgca	ggccaggagg	agaccgacgc	tgggctccag
22921	catggctacc	tgggaggaga	ggaggatgtg	ctgctaaaac	acttgcagcg	ccaatccatc
22981	atcctccggg	acgccctggc	cgaccggagc	gaaacccctc	tcagcgtcga	ggagctgtgt
23041	cgggcctacg	agctcaacct	cttctcgccg	cgcggtgcccc	ccaaacgcca	gccaacgggc
23101	acctgcgagc	ccaacccgcg	tctcaacttc	tatcccgtct	ttgcgggtccc	cgaggcccta
23161	gccacctatc	acatcttttt	caagaaccaa	aagatccccg	tctcctgccg	cgccaaccgc
23221	accgcgcgcg	acgcgctcct	cgtcttgggg	cccggcgcg	gcatacctga	tatcgcttcc
23281	ctggaagagg	tgcccaagat	cttcgaaggg	ctcggtcggg	acgagacgcg	cgcggaacac
23341	gctctgaaag	aaacagcaga	ggaagagggg	cacactagcg	ccctggtaga	gttgggaaggc
23401	gacaacgcca	ggctggccgt	gctcaagcgc	agcgtcgagc	tcacccactt	cgcctacccc
23461	gccgtcaacc	tcccgcacca	ggtcatgcgt	cgcacatggt	atcagctcat	catgccccac
23521	atcgaggccc	tcgatgaaag	tcaggagcag	cgccccgagg	acgcccggcc	cgtggtcagc
23581	gacgagcagc	tcgcgcggtg	gctcgggacc	cgcgaccccc	aggctttgga	acagcggcgc
23641	aagctcatgc	tggccgtggt	cctgggtcacc	ctcgagctcg	aatgcatgcg	ccgcttcttc
23701	agcgaccccc	agaccctgcg	taaggtcgag	gagaccctgc	actacacttt	caggcacgggt
23761	ttcgctcaggc	aggcctgcaa	gatctccaac	gtggagctga	ccaacctggg	ctcatgcctg
23821	gggatcctgc	acgagaaccg	cctgggacag	accgtgctcc	actctactct	gaagggcgag
23881	gcgcgtcggg	actatgtccg	cgactgtgta	tttctcttta	tctgccacac	ctggcaagca
23941	gccatgggcg	tgtggcagca	gtgtctcgag	gacgaaaatc	tgaaggagct	ggacaagctt
24001	cttgctagaa	accttaaaaa	gctgtggacg	ggcttcgacg	agcgcaccgt	cgcctcggac
24061	ctggccgaga	tcgttttttc	agaacgcctg	aggcagacgc	tgaaggcg	gctgcccgcg
24121	ttcatgagcc	agagcatggt	gcaaaaactac	cgcaactttca	ttctcgagcg	atctgggatg
24181	ctacccgcca	cctgcaacgc	attcccctcc	gactttgtcc	cgctgagcta	ccgcgagtg
24241	ccccgcgcgc	tgtggagcca	ctgctatctc	ttgcagctgg	ccaactacat	cgcctaccac
24301	tcggacgtga	tcgaggacgt	gagcggcgag	gggcttctcg	agtgccactg	ccgctgcaac
24361	ctgtgctccc	cgcaccgctc	cctgggtctgc	aacccccagc	ttctgagcga	gaccaggtc
24421	atcggtacct	tcgagctgca	aggctccgag	gagtcacacc	ctccgctgaa	actcacgccg
24481	gggttgtgga	cttccgcgta	cctgcgcaaa	tttgtaccgc	aggactacca	cgcccatgaa
24541	ataaagttct	tcgaggacca	atcgcgccca	cagcacgcgg	atctcacggc	ctgcgtcatc
24601	acccaggggcg	cgatcctcgc	ccaattgcac	gccatccaaa	aatcccgcga	agagtttctt
24661	ctaaaaaagg	gtagaggggt	ctacctggac	ccccagacgg	gcgaggtgct	caaccggggt
24721	ctccccagc	atgccgagga	agaagcagga	gccgctagtg	gagcagatgg	aagaagaatg
24781	ggacagccag	gcagaggagg	acgaatggga	ggaggagaca	gaggaggaag	aattggaaga
24841	ggtggaagag	gagcaggaaa	cagagcagcc	cgtcgccgca	ccatccgcgc	cggcagcccc
24901	gccggtcacg	gatacaacct	ccacagctcc	ggccaagcct	cctcgtagat	gggatcgagt
24961	gaaggggtgac	ggtaagcacg	agcggcaggg	ctaccgatca	tggaggggtcc	acaaagccgc
25021	gatcatcgcc	tgcttgcaag	actgcggggg	gaacatcgct	ttcgcccgc	gctacctgct
25081	cttccaccgc	ggggtgaaca	tccccgcga	cgtgttgcat	tactaccgtc	accttcacag
25141	ctaagaaaaa	gcaagtaaga	ggagtcgccc	gaggaggcct	gaggatcgcg	gcgaacgagc
25201	cctcgaccac	cagggagctg	aggaaccgga	tcttccccac	tctttatgcc	atttttcagc
25261	agagtcgagg	tcagcagcaa	gaactgaaag	taaaaaaccc	gtctctgcgc	tcgctcacc
25321	gcagttgctt	gtaccacaaa	aacgaagatc	agctgcagcg	cactctcgaa	gacgccgagg
25381	ctctgttcca	caagtactgc	gcgctcactc	ttaaagacta	aggcgcgccc	acccggaaaa
25441	aaggcgggaa	ttacctcatc	gccaccatga	gcaaggagat	tcccaccctt	tacatgtgga
25501	gctatcagcc	ccagatgggc	ctggccgcgg	gcgcctccca	ggactactcc	acccgcatga
25561	actggctcag	tgccggcccc	tcgatgatct	cacgggtcaa	cggggtccgt	aaccatcgaa

FIG. 5A-7

25621	accagatatt	gttggagcag	gcggcggtca	cctccacgcc	cagggcaaag	ctcaaccgcg
25681	gtaattggcc	ctccaccctg	gtgtatcagg	aaatcccccg	gccgactacc	gtactacttc
25741	cgcgtgacgc	actggccgaa	gtccgcatga	ctaactcagg	tgtccagctg	gccggcgggc
25801	cttcccgggtg	cccgtccgc	ccacaatcgg	gtataaaaac	cctgggtgatc	cgaggcagag
25861	gcacacagct	caacgacgag	ttgggtgagct	cttcgatcgg	tctgcgaccg	gacggagtgt
25921	tccaactagc	cggagccggg	agatcgtcct	tcactcccaa	ccaggcctac	ctgaccttgc
25981	agagcagctc	ttcggagcct	cgctccggag	gcacgcgaac	cctccagttc	gtggaggagt
26041	ttgtgccctc	ggtctacttc	aacccttct	cgggatcgcc	aggcctctac	ccggacgagt
26101	ttataccgaa	cttcgacgca	gtgagagaag	cgggtggacgg	ctacgactga	atgtcccattg
26161	gtgactcggc	tgagctcgtc	cggttgaggc	atctggacca	ctgccgccgc	ctgcgctgct
26221	tcgcccggga	gagctgcgga	ctcatctact	ttgagtttcc	cgaggagcac	cccaacggcc
26281	ctgcacacgg	agtgcggatc	accgtagagg	gcaccaccga	gtctcacctg	gtcaggttct
26341	tcacccagca	acccttctctg	gtcgcgaggg	accggggagc	taccacctac	accgtctact
26401	gcattctgtcc	taccccgaag	ttgcatgaga	atttttgctg	tactctttgt	ggtgagttta
26461	ataaaagctg	aactaagaac	cttcttttga	atcccttgct	atcatcaaat	caacaagacc
26521	atcaacttca	ccttttgagga	acaggtgaac	tttacctgca	agccacacaa	gaagtacatc
26581	atctggtttt	atcacaaac	tactctagca	gtagccaaca	cctgctcgaa	cgacgggtgt
26641	ctcctaccta	acaatctcac	cagtggacta	accttctcag	ttaaaagggc	aaagctaatt
26701	cttcacgcgc	ctattgtaga	aggaacttac	cagtgtcaga	gcggaccttg	cttccacagt
26761	ttcactttgg	tgaacgttac	cggcagcagc	acagccgctc	cagaaacatc	taaccttctt
26821	tctgatacta	acaaacctcg	tgtcggaggt	gagctttggg	ttccatctct	aacagagggt
26881	gggagttcta	ttgaagtggg	tgggtatttg	atttttagggg	tgggtcattgg	tgggtgcata
26941	gcagtgtgtg	atcaacttcc	ttgctgggtc	gaaatcaggg	tatttatctg	ctgggtcaga
27001	cattgtgggg	aggaaccatg	aaggggctct	tgttgattat	cctttccctg	gtgggggggtg
27061	tgtgtgcatg	ccacgaacag	ccacgatgta	acattaccac	aggcaatgag	aggaacgact
27121	gctctgtagt	tatcaaatgc	gagcaccatt	gtcctctcaa	catcacattc	aagaataaga
27181	ccatgggaaa	tgtatgggtg	ggattctggc	aaccaggaga	tgagcagaac	tacacgggtca
27241	ctgtccatgg	tagcgatggc	aatcacactt	tcggtttcaa	attcattttt	gaagtcatgt
27301	gtgatatac	actacatgtg	gctagacttc	atggcttgtg	gccccctacc	aaggagaaca
27361	tgggtgggttt	ttctttggct	tttgtgatca	tggcctgctt	gatgtcaggt	ctgctggtag
27421	gggctctagt	gtgggtttctg	aaacgcaagc	ccagggtacgg	aatgaggag	aaggaaaaat
27481	tgctataaat	tctttttctc	ttcgcacaac	catgaataca	gtgttccgta	tcgtgctgct
27541	ctctcttctt	gtagctttcg	gtcaggcagg	aattcatatt	attaatgcta	catgggtggga
27601	taatataact	ttagtgggac	cctcagatac	tccagttacc	tggtagatg	gcaagggatt
27661	gcaattttgt	gacggaagta	cagttaagaa	tccgcagatc	agacatactt	gtaatgatca
27721	aaacttaact	ctgattcatg	ttaacaaaac	ccatgaaaga	acatacatgg	gttacagaca
27781	tgacagtaag	ggaaaagtag	actataaggt	tacagtcatt	ccacctctc	ctgctactgt
27841	aaagccacaa	ccagatccag	aaaatgtctt	tgtttatatg	ggaaataatg	taacttttagt
27901	tggacctcca	ggaattccag	ttagttggta	ttatcataat	ggcacacagt	tctgcgatgg
27961	agataaaaatt	attcatccag	aattcaacca	cacctgtgat	aaacaaaacc	ttactactgct
28021	gtttgtaaac	tttacacatg	atggaggcta	tcttggttcc	aattacaaag	gtactcagag
28081	aattcagtat	gaggttatag	ttttagatcg	atttccaaat	tctgggtcaga	tgaaaatttga
28141	agaacaaagt	gaggaaacag	aacagaaaca	tactgagcat	aataaggctg	gacaaaagca
28201	gggtatagat	acaaatcaaa	agaaagctaa	taacagacaa	aagccatctc	aaaggccatc
28261	aagaagacgg	ccgacaaaca	ctcctgagac	aaaacaactt	acagtgtcta	ttgggtctaa
28321	cttaacttta	gttgggtccag	atggaaaagt	cacttggtat	gatgggtgatt	taaaaagacc
28381	atgtgaagaa	caaaactata	ggcttccaca	tcagtgtagt	gctcagaact	taactttaat
28441	taatgtaact	aaatctcatg	agggaaactta	ctatggcact	aatgacaaag	acgaaagcaa
28501	aagatacaga	gtgaaagtga	acactacaaa	ttctcaagct	gtaaaaatta	acccatatac
28561	cagacctact	actcctgatc	agaaacacag	atttgaatta	caaattgaaa	ataatgcaaa
28621	tgatgaagaa	tcaaaaattc	catctactac	tgtggcaatc	gtgggtgggag	tgattgcggg
28681	cttcataact	ataatcattg	tcattctgtg	ctacatctgc	tgccgcaagc	gtcccagggc
28741	atacaatcat	atggtagacc	cactactcag	cttctcttac	tgagactcag	tcactttcat
28801	ttcagaacca	tgaaggcttt	cacagcttgc	gttctgttta	acataatcac	acttagtgta
28861	gctgcaaatg	gtttttaaaca	tgttaatggt	accagattaa	gtaatgtaac	actgacagga
28921	gctggaatta	atactacatg	gacaggggtat	tttaatgagg	gtccaaaagg	aaaaaatggg
28981	tggatgaata	tttgacacatg	gggcgatcct	agatatgtgt	gccatggaaa	tagcagtact
29041	attactaatc	ttacagttgt	ggcacttcta	aatttaacca	ctaacagaag	atttaaagca
29101	gaaagtttta	ctagtaacga	tggttatgaa	actaccagtg	caaaatttta	tgaaattaaa
29161	attattgagc	ttccaacaac	tagagcacc	accacagtta	ggacaacaca	gcctaccact
29221	gtgcccacta	cacatccaac	caccacagtc	agtacaacta	ttgagaccac	tactcatact

FIG. 5A-8

29281	acacagctag	acacaacagt	gcagaatact	acttttattga	ttggggttttt	actgagagga
29341	aataaaagta	ctactgaaca	gacagaggct	acctcaagt	ccttcagcag	cactgcaaat
29401	ttactttcgc	ttgcttggac	taatgaaacc	ggagtatcat	tgatgaatcg	acagccttac
29461	tcagggtttgg	atattcaa	tacttttctg	gttgtctgtg	ggatccttat	tcttgcggtt
29521	cttctgtact	ttgtctgctg	caaagccaga	gagaaatcta	ggcggcccat	atacaggcca
29581	gtaatcgggg	aacctcagcc	tctccaagt	gatggaggct	taaggaatct	tctcttctct
29641	tttacagtat	ggtgatcagc	catgattcct	aggttcttcc	tatttaacat	cctgttctgt
29701	ctcttcaaca	tctgtgctgc	cttcgcggcc	gtctcgcacg	cctcgcccga	ctgtctaggg
29761	cctttcccaa	catacctcct	ctttgccctg	ctaacctgca	cctgcgtctg	cagcattgtc
29821	tgcgtgggtca	tcacctttct	gcagctcatc	gactgggtgt	gcgcgcgcta	caattatctc
29881	caccacagtc	ccgaatacag	ggacgagaac	gtagccagaa	tcttaaggct	catctgacca
29941	tgcagcctct	gctcatgctg	atatccctcc	tatcccttgc	ccttgccact	tctgtctgatt
30001	actctaaatg	caaattcgcg	gacatatgga	atttcttaga	ttgctatcag	gagaaaattg
30061	atatgccctc	ctattacttg	gtgattgttg	gggtagtcac	ggtctgtctca	tgcactttct
30121	ttgccattat	gatctacccc	tgttttaatc	ttggctggaa	ctctgttgag	gcattcacat
30181	acacactaga	aaacagttca	ctagcctcca	cgccaccacc	cacaccgcct	ccccgcagaa
30241	atcagttccc	tatgattcag	tacttagaag	agccccctcc	cgggccccct	tccactgtta
30301	gctactttca	cataaccggc	ggcgatgact	gaccacctgg	acctcgagat	ggacggccag
30361	gcctccgagc	agcgcacatc	gcaactgcgc	gtccgacagc	agcaggagcg	ggccgcgaag
30421	gagctcctcg	atgccatcaa	catccaccag	tgcaagaagg	gcatcttctg	cctgggtcaag
30481	caggcaaaga	tcacctacga	gctcgtgtcc	ggcggcaagc	agcatcgctc	cgcctatgag
30541	ctaccccagc	agaagcaaaa	gttcacctgc	atgggtggcg	tcaaccccat	agtcatcacc
30601	cagcagtcgg	gcgagaccaa	cggctgcac	cactgctcct	gcgaaagccc	cgagtgcac
30661	tactccctcc	tcaagaccct	ttgcggactc	cgcgacctcc	tccccatgaa	ctgatgttga
30721	ttaaaagccc	aaaaaccaat	caaacccttc	cccaattact	cataagaata	aatcattgga
30781	actaatcatt	caataaagat	cacttacttg	aaatctgaaa	gtatgtctct	ggtgtagttg
30841	ttcagcagca	cctcggaacc	ctcctcccag	ctctgggtact	ccagtccccg	gcgggcgggc
30901	aacttcctcc	acaccttgaa	agggatgtca	aattcctggg	ccacaatttt	cattgtcttc
30961	cctcagatga	caaagaggct	ccgggtggaa	gatgacttca	accccgctca	cccctatggc
31021	tacgcgcgga	atcagaatat	ccccttcctt	actccccct	ttgtttcttc	cgatggattc
31081	caaaacttcc	cacctggggg	cctgtcactc	aaactggctg	acccaatcgc	catcactaat
31141	ggggatgttt	cactcaaggt	gggagggggg	cttactgttg	aaaaagatag	tggaaatcta
31201	aaggtgaacc	ctaaggctcc	cttgcaagtt	acaactgata	aacagttgga	aattgcactg
31261	gcttatccat	ttgaagtcag	taatggcaag	cttggcataa	aagcagggtca	tggattgaaa
31321	gtcattgaca	aaattgctgg	tttggaagg	ttggcaggta	cgcttgtagt	tttgactgga
31381	aaaggaatag	gtactgaaaa	tcttgaaaac	agtgatgggt	caagtagagg	agttgggtata
31441	aacgtaagac	ttgctaaaga	tggagggtctg	tcttttgata	aaaaggggtga	tttagttgct
31501	tgggaataaac	atgatgacag	acgcactcta	tggacaactc	ccgacccatc	cccaaattgt
31561	acaatcgatc	aggaaaggga	ttcaaagctc	acttttagtat	taacaaaatg	tggcagtcaa
31621	atttttggcta	atgtctcttt	acttgttgta	aaaggaaaat	ttagtaacat	aaacaataat
31681	actaatccaa	ctgataaaaa	aatcacagta	aagctacttt	ttaatgaaaa	gggagtatta
31741	atggacagtt	cgacacttaa	gaaagaatat	tggaaactaca	gaaatgataa	ttctactgta
31801	tctcaggcct	atgataatgc	agttcctttt	atgccaaaca	taaaagctta	tcctaaacct
31861	accacagaca	cttcgggctaa	accagaagat	aaaaaaagt	ctgctaaaag	atacattgtg
31921	agcaatgtct	atattggagg	cttgccagat	aaaactgttg	ttataactat	taagttaa
31981	gcagaaactg	aatgtgctta	ttcgattacc	tttgaattca	catgggcaaa	aacctttgaa
32041	gatgtgcagt	ttgattcctc	ctctttttacc	ttttcctata	ttgcccaga	aaatgaggac
32101	gaagacaaat	aaaatgtttt	aaaatgaatt	catgtatctt	tattgatttt	tacaccagca
32161	cgggtagtca	gtctcccacc	accagcccat	ttcacagtgt	aaacgattct	ctcagcacgg
32221	gtggccttaa	atagggaat	gttctgatta	gtgcgggaac	tggacttggg	gtctataatc
32281	cacacagttt	cctggcgagc	caaacggggg	tcgggtgattg	agatgaagcc	gtcctctgaa
32341	aagtcaccca	agcgggcctc	acagtcacag	gtcacagtct	ggtgaaacga	gaagaacgca
32401	cagattcata	ctcggaac	aggatgggtc	tgtgcctctc	catcagcgcc	ctcaacagtc
32461	tctgccgccc	gggctcgggtg	cggctgctgc	agatggggtc	gggatcacaa	gtctctctga
32521	ctatgatccc	cacagccttc	agcatcagtc	tcctgggtgcg	tcgggcacag	caccgcatcc
32581	tgatctcgct	catgttctca	cagtaagtgc	agcacataat	caccatgtta	ttcagcagcc
32641	cataattcag	ggtgctccag	ccaaaactca	tggtggggat	gatggaaccc	acgtgaccat
32701	cgtaccagat	gcggcagtat	atcagatgcc	tgccccctcat	gaacacactg	cccatataca
32761	tgatctcttt	gggcatgtct	ctgttcacaa	tctgacggta	ccagggaag	cgctgggtga
32821	acatgcaccc	gtaaatgact	ctcctgaacc	acacggccag	cagggtgcct	ccgccccgac
32881	actgcaggga	gcccggggat	gaacagtggc	aatgcaggat	ccagcgctcg	taccgcctca

FIG. 5A-9

32941	ccatctgagc	tctcaccaag	tccagggtag	cggggcacag	gcacactgac	atacatcttt
33001	ttaaaatttt	tatttcctct	ggagtcaaga	tcatatccca	ggggactgga	aactcttgga
33061	gcagggtaaa	gccagcagca	catggtaatc	cacggacaga	acttacatta	tgataatctg
33121	catgatcaca	atcaggcaac	aggggatgtt	gttcagtcag	tgaagccctg	gtttcctcat
33181	cagatcgtgg	taaacggggc	ctgcgatatg	gatgatggcg	gagcgagctg	gattgaatct
33241	cggtttgcat	tgtagtggat	tctcttgctg	accttgctgt	acttctgcca	gcagaaatgg
33301	gcccttgaac	agcagatacc	cctcctgcgg	ccgtcctttc	gctgctgccg	ctcagtcatc
33361	caactgaagt	acatccattc	tcgaagattc	tggagaagtt	cctctgcatc	tgatgaaaca
33421	aaaaacccgt	ccatgcgaat	tcccctcatc	acatcagcca	ggactctgta	ggccatcccc
33481	atccagttaa	tgctgccttg	tctatcattc	agagggggcg	gtggcaggat	tggaagaacc
33541	atttttattc	caaacgggtc	cgaaggacga	taaagtgcaa	gtcacgcagg	tgacagcggt
33601	cccctccgct	gtgctgggtg	aaacagacag	ccaggtcaaa	accactcta	ttttcaaggt
33661	gctcgaccgt	ggcttcgagc	agtggctcta	cgcgtacatc	cagcataaga	atcacattaa
33721	aggctggccc	tccatcgatt	tcatcaatca	tcaggttaca	ttcctgcacc	atccccaggt
33781	aattctcatt	tttccagcct	tggattatct	ctacaaattg	ttgggtgtaag	tccactccgc
33841	acatgtggaa	aagctcccac	agtgccccct	ccactttcat	aatcaggcag	accttcataa
33901	tagaaacaga	tcctgctgct	ccaccacctg	cagcgtgttc	aaaacaacaa	gattcaataa
33961	ggttctgccc	tccgccctga	gctcgcgcct	caatgtcagc	tgcaaaaaat	cacttaagtc
34021	ctgggccact	acagctgaca	attcagagcc	agggctaagc	gtgggactgg	caagcgtaag
34081	ggaaaacttt	aatgctccaa	agctagcacc	caaaaactgc	atgctggaat	aagctctctt
34141	tgtgtctccg	gtgatgcctt	ccaaaatgtg	agtgataaag	cgtggtagtt	tttctttaat
34201	catttgcgta	atagaaaagt	cctgtaaata	agtcactagg	accccaggga	ccacaatgtg
34261	gtagcttaca	ccgcgtcgct	gaagcatggg	tagtagagat	gagagtctga	aaaacagaaa
34321	gcatgcacta	aactaagggt	gctattttca	ctgaaggaaa	aatcactctc	tccaacaaca
34381	gggtacccac	tgggtggccc	ttgcggacat	acaaaaatcg	gtccgtgtga	ttaaaaagca
34441	gcacagtaag	ttcctgtctt	cttccggcaa	aaatcacatc	ggactggggt	agtatgtccc
34501	tggcatggta	gtcattcaag	gccataaatc	tgccctgata	tccagtagga	accagcacac
34561	tcacttttag	gtgaagcaat	accaccccat	gcggaggaat	gtggaaagat	tcagggcaaa
34621	aaaaattata	tctattgcta	gtcccttcct	ggacgggagc	aatccctcca	ggactatcta
34681	tgaaagcata	cagagattca	gccatagctc	agcccgttta	ccagtagaca	gagagcacag
34741	cagtacaagc	gccaacagca	gcgactgact	accactgac	ccagctccct	atttaaaggc
34801	gccttacact	gacgtaatga	ccaaagggtc	aaaaaccccg	ccaaaaaaaa	acacacacgc
34861	cctgggtgtt	ttttgcgaaa	acacttccgc	gttctcactt	cctcgtattg	atttcgtgac
34921	ttaaacttccg	ggttcccacg	ttacgtcact	tctgccctta	catgtaactc	agtcgtaggg
34981	cgccatcttg	cccacgtcca	aaatggcttc	catgtccagc	cacgcctccg	cggcgaccgt
35041	tagccgtgcg	tcgtgacgtc	atttgcatca	tcttctctcg	tccaatcagc	gctggccccg
35101	ccctaaattc	aaaagctcat	ttgcatgtta	acttttggtt	acttttggtg	gtatattatt
35161	gatgatc					

FIG. 5A-10

Grp	Vaccine at Wk 0, Wk 4	Monkey ID	Pre		Wk 4		Wk 8		Wk 12	
			Mock	Gag	Mock	Gag	Mock	Gag	Mock	Gag
1	Ad24ΔE1gagΔOrf6Ad5Orf6 10 ¹¹ vp	00C072	3	4	4	381	3	150	3	68
		00C178	3	3	1	559	1	743	0	635
		00C222	0	3	1	369	1	753	0	670
		00D011	1	9	9	211	4	273	0	520
		00D023	0	6	0	295	1	459	1	368
		00D031	15	5	10	103	1	101	1	40
2	Ad24ΔE1gagΔOrf6Ad5Orf6 10 ¹⁰ vp	99C168	4	6	0	118	5	241	3	209
		99C170	10	5	5	241	3	141	3	103
		99C173	1	3	0	23	0	14	0	21
3	Ad24ΔE1gagΔE4Ad5Orf6 10 ¹⁰ vp	99C154	0	3	0	93	0	60	1	53
		99C158	1	0	1	141	0	101	1	120
		99C177	0	0	0	45	0	39	0	79
4	MRKAd5-HIVgag 10 ¹¹ vp	00C018	1	5	13	1025	0	824	3	753
		00C034	0	4	5	219	5	404	0	491
		00C058	4	4	3	1086	0	440	0	439
5	MRKAd5-HIVgag 10 ¹⁰ vp	99C218	0	3	5	2500	0	1580	10	1655
		99C227	6	1	4	529	5	365	5	1004
		99D185	ND	ND	0	425	0	310	0	271

FIG. 6

Vaccine at Wk 0, Wk 4	Monkey ID	Gag-Specific (Wk 12)	
		%CD4	%CD8
Ad24ΔE1gagΔOrf6Ad5Orf6 10 ¹¹ vp	00C072	0.02	0.02
	00C178	0.05	0.38
	00C222	0.02	0.40
	00D011	0.02	0.27
	00D023	0.01	0.11
	00D031	0.01	0.01
MRKAd5-HIVgag 10 ¹¹ vp	00C018	0.05	0.41
	00C034	0.06	0.18
	00C058	0.02	0.28

FIG. 7

Grp	Vaccine at Wk 0, Wk 4	Monkey ID	Wk 4	WK 8
1	Ad24ΔE1gagΔOrf6Ad5Orf6 10 ¹¹ vp	00C072	<10	77
		00C178	<10	26
		00C222	<10	423
		00D011	<10	98
		00D023	<10	<10
		00D031	<10	<10
2	Ad24ΔE1gagΔOrf6Ad5Orf6 10 ¹⁰ vp	99C168	<10	<10
		99C170	<10	<10
		99C173	<10	<10
3	Ad24ΔE1gagΔE4Ad5Orf6 10 ¹⁰ vp	99C154	<10	<10
		99C158	<10	<10
		99C177	<10	<10
4	MRKAd5-HIVgag 10 ¹¹ vp	00C018	34	1017
		00C034	14	423
		00C058	46	934
5	MRKAd5-HIVgag 10 ¹⁰ vp	99C218	20	99
		99C227	40	767
		99D185	17	342

FIG. 8

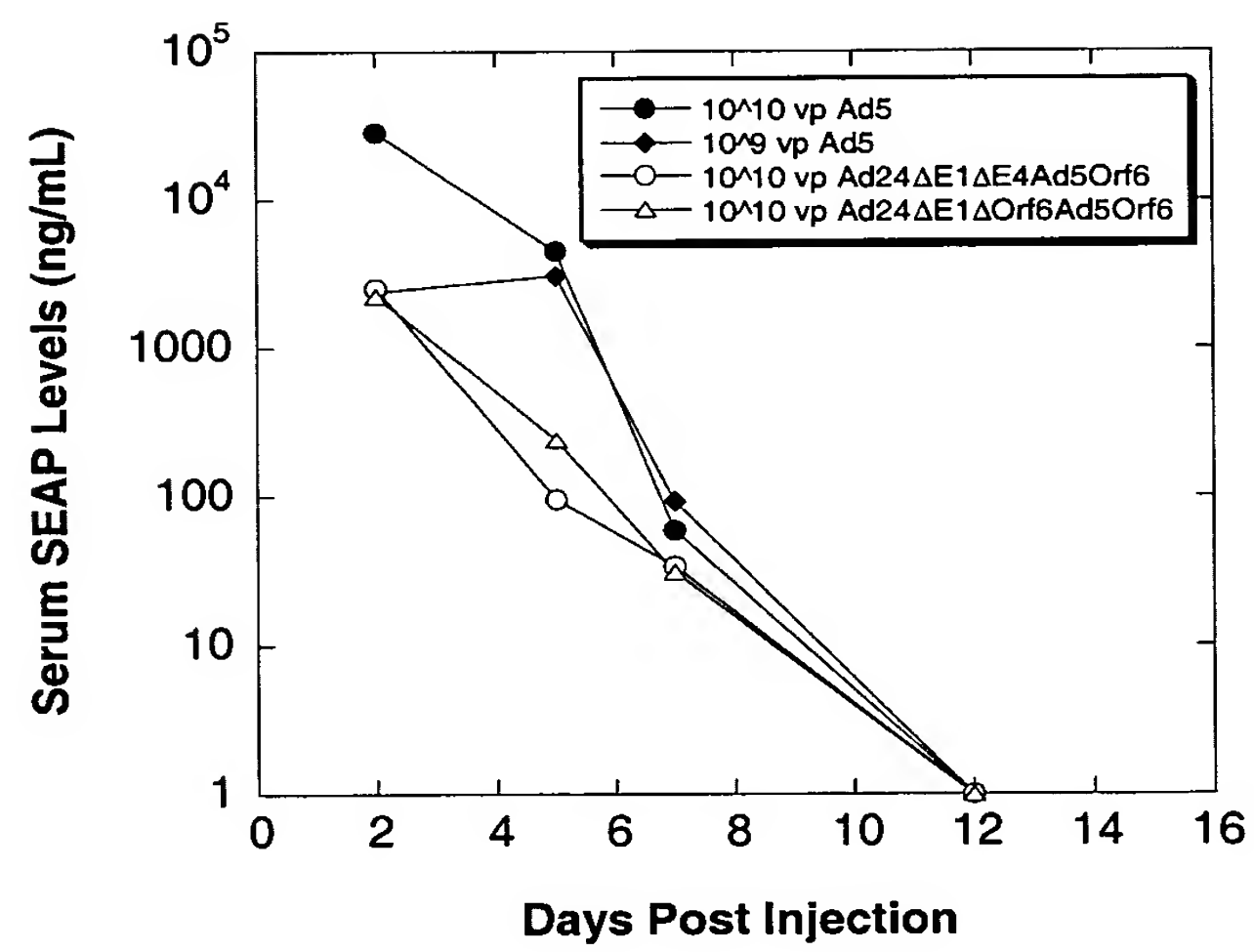


FIG. 9

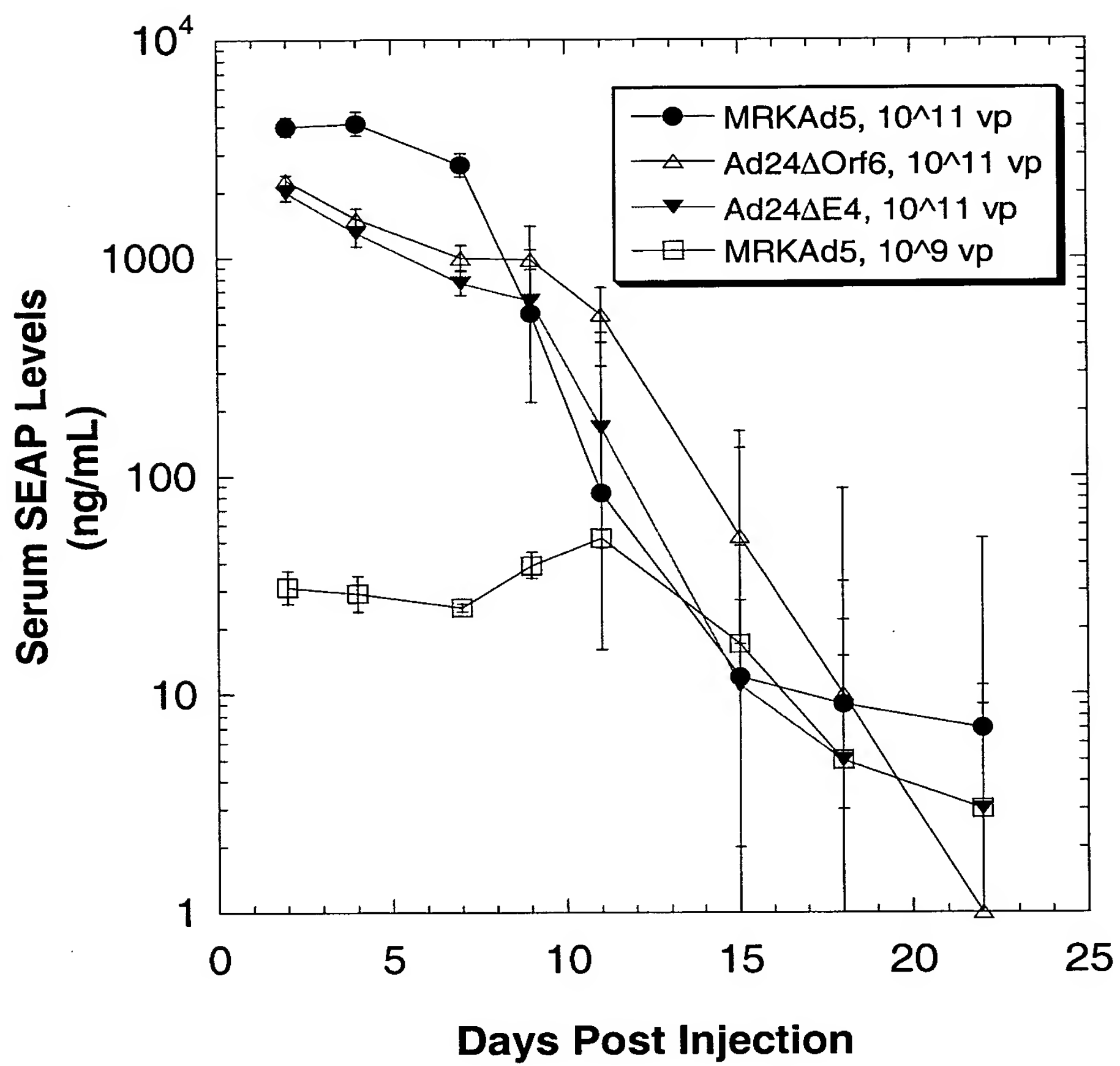


FIG. 10

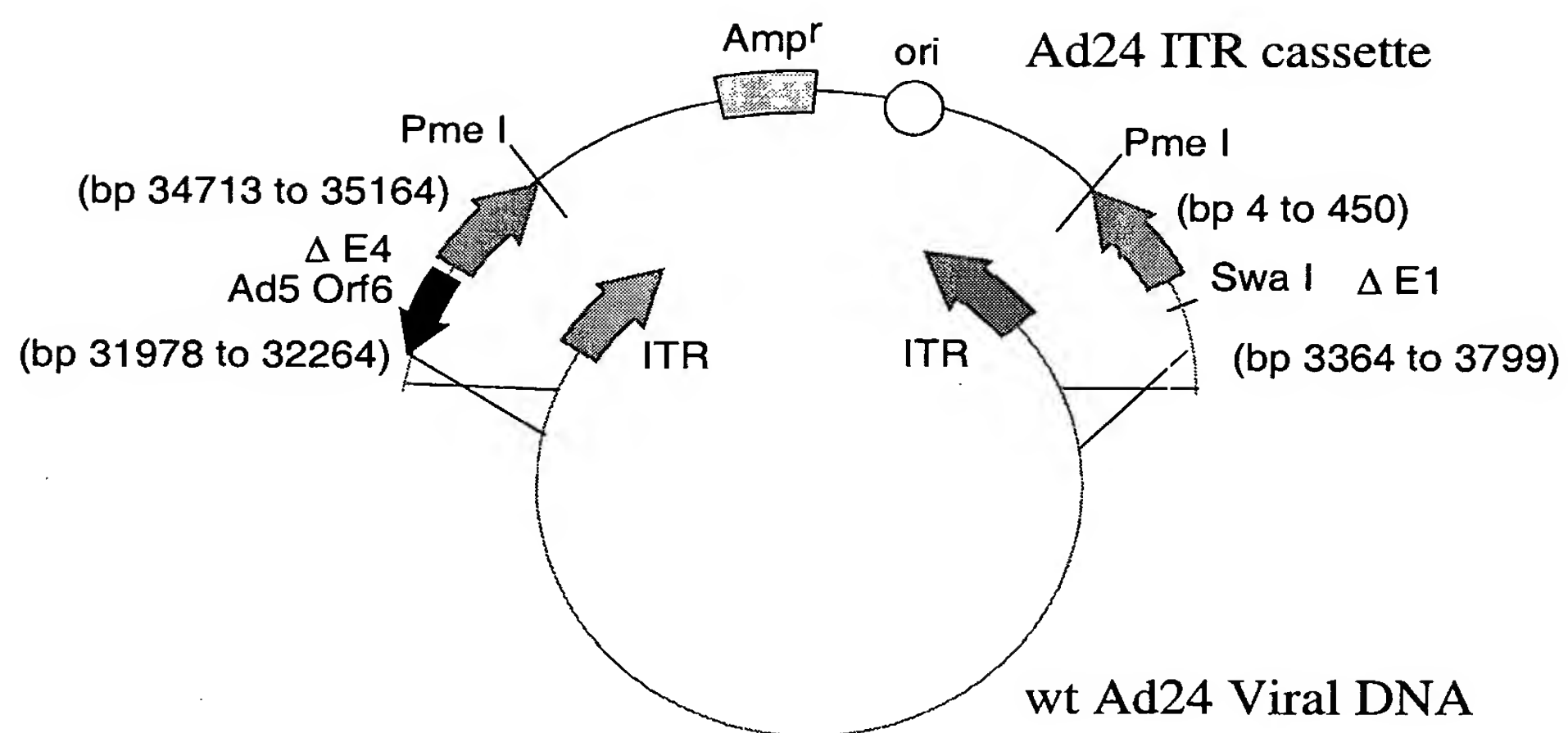


FIG. 11

Sequence of the open reading frame for FL-gag (human codon optimized)

atgggtgctagggcttctgtgctgtctggtggtgagctggacaagtgggagaagatcaggctgaggcctggtggc
aagaagaagtacaagctaaagcacattgtgtgggcctccagggagctggagaggtttgctgtgaaccctggcctg
ctggagacctctgaggggtgcaggcagatcctgggccagctccagccctccctgcaaacaggctctgaggagctg
aggtccctgtacaacacagtggctaccctgtactgtgtgcaccagaagattgatgtgaaggacaccaaggaggcc
ctggagaagattgaggaggagcagaacaagtccaagaagaaggcccagcaggctgctgctggcacaggcaactcc
agccagggtgtcccagaactacccattgtgcagaacctccagggccagatggtgcaccaggccatctccccccg
accctgaatgcctgggtgaagggtggtggaggagaaggccttctccctgagggtgatccccatgttctctgcctg
tctgaggggtgccacccccaggacctgaacaccatgctgaacacagtggggggccatcaggctgccatgcagatg
ctgaaggagaccatcaatgaggaggctgctgagtgggacaggctgcatcctgtgcacgctggccccattgcccc
ggccagatgaggagagcccaggggctctgacattgctggcaccacctccacctccaggagcagattggctggatg
accaacaacccccccatccctgtgggggaaatctacaagaggtggatcatcctgggcctgaacaagattgtgagg
atgtactccccacctccatcctggacatcaggcagggccccaaggagcccttcagggactatgtggacagggtc
tacaagacctgagggctgagcaggcctcccaggaggtgaagaactggatgacagagacctgctggtgcagaat
gccaacctgactgcaagaccatcctgaaggccctgggcctgctgccacctggaggagatgatgacagcctgc
cagggggtggggggccctggtcacaaggccagggtgctggctgaggccatgtcccagggtgaccaactccgccacc
atcatgatgcagaggggcaacttcaggaaccagaggaagacagtgaagtgcttcaactgtggcaagggtgggccac
attgccaagaactgtagggccccccaggaagaagggtgctggaagtgtggcaaggaggggccaccagatgaaggac
tgcaatgagaggcaggccaacttcctggggcaaaatctggccctcccacaagggcaggcctggcaacttcctccag
tccaggcctgagcccacagccccctcccaggaggtccttcagggttggggaggagaagaccacccccagccagaag
caggagcccattgacaaggagctgtacccccctggcctccctgagggtccctgtttggcaacgacccctcctcccag
taaaataaagcccgggcagat

FIG. 12

1	ccattgcata	cgttgtatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgctt
181	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtag	atcaagtgtg	tcatatgcca	agtacgcccc	ctattgacgt	caatgacggg
361	aaatggcccg	cctggcatta	tgcccagtag	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggcgtggat	agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatggggcg	taggcgtgta	cgggtgggag	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccgggacc	gatccagcct	ccgcggcccg	gaacgggtgca	ttggaacgcg	gattccccgt
781	gccaagagtg	agatctacca	TGGGTGCTAG	GGCTTCTGTG	CTGTCTGGTG	GTGAGCTGGA
841	CAAGTGGGAG	AAGATCAGGC	TGAGGCCTGG	TGGCAAGAAG	AAGTACAAGC	TAAAGCACAT
901	TGTGTGGGCC	TCCAGGGAGC	TGGAGAGGTT	TGCTGTGAAC	CCTGGCCTGC	TGGAGACCTC
961	TGAGGGGTGC	AGGCAGATCC	TGGGCCAGCT	CCAGCCCTCC	CTGCAAACAG	GCTCTGAGGA
1021	GCTGAGGTCC	CTGTACAACA	CAGTGGCTAC	CCTGTACTGT	GTGCACCAGA	AGATTGATGT
1081	GAAGGACACC	AAGGAGGCC	TGGAGAAGAT	TGAGGAGGAG	CAGAACAAGT	CCAAGAAGAA
1141	GGCCCAGCAG	GCTGCTGCTG	GCACAGGCAA	CTCCAGCCAG	GTGTCCCAGA	ACTACCCCAT
1201	TGTGCAGAAC	CTCCAGGGCC	AGATGGTGCA	CCAGGCCATC	TCCCCCGGA	CCCTGAATGC
1261	CTGGGTGAAG	GTGGTGGAGG	AGAAGGCCTT	CTCCCCTGAG	GTGATCCCCA	TGTTCTCTGC
1321	CCTGTCTGAG	GGTGCCACCC	CCCAGGACCT	GAACACCATG	CTGAACACAG	TGGGGGGCCA
1381	TCAGGCTGCC	ATGCAGATGC	TGAAGGAGAC	CATCAATGAG	GAGGCTGCTG	AGTGGGACAG
1441	GCTGCATCCT	GTGCACGCTG	GCCCCATTGC	CCCCGGCCAG	ATGAGGGAGC	CCAGGGGCTC
1501	TGACATTGCT	GGCACCACCT	CCACCCTCCA	GGAGCAGATT	GGCTGGATGA	CCAACAACCC
1561	CCCCATCCCT	GTGGGGGAAA	TCTACAAGAG	GTGGATCATC	CTGGGCCTGA	ACAAGATTGT
1621	GAGGATGTAC	TCCCCACCT	CCATCCTGGA	CATCAGGCAG	GGCCCCAAGG	AGCCCTTCAG
1681	GGAATATGTG	GACAGGTTCT	ACAAGACCCT	GAGGGCTGAG	CAGGCCTCCC	AGGAGGTGAA
1741	GAACTGGATG	ACAGAGACCC	TGCTGGTGCA	GAATGCCAAC	CCTGACTGCA	AGACCATCCT
1801	GAAGGCCCTG	GGCCCTGCTG	CCACCCTGGA	GGAGATGATG	ACAGCCTGCC	AGGGGGTGGG
1861	GGGCCCTGGT	CACAAGGCCA	GGGTGCTGGC	TGAGGCCATG	TCCCAGGTGA	CCAACCTCCGC
1921	CACCATCATG	ATGCAGAGGG	GCAACTTCAG	GAACCAGAGG	AAGACAGTGA	AGTGCTTCAA
1981	CTGTGGCAAG	GTGGGCCACA	TTGCCAAGAA	CTGTAGGGCC	CCCAGGAAGA	AGGGCTGCTG
2041	GAAGTGTGGC	AAGGAGGGCC	ACCAGATGAA	GGACTGCAAT	GAGAGGCAGG	CCAACCTCCT
2101	GGGCAAAATC	TGGCCCTCCC	ACAAGGGCAG	GCCTGGCAAC	TTCTCCAGT	CCAGGCCTGA
2161	GCCCACAGCC	CCTCCCGAGG	AGTCCTTCAG	GTTTGGGGAG	GAGAAGACCA	CCCCAGCCA
2221	GAAGCAGGAG	CCCATTGACA	AGGAGCTGTA	CCCCCTGGCC	TCCCTGAGGT	CCCTGTTTGG
2281	CAACGACCCC	TCCTCCAGT	AAaataaagc	ccgggcagat	ctgatctgct	gtgccttcta
2341	gttgccagcc	atctgttgtt	tgccccctccc	ccgtgccttc	cttgaccctg	gaagggtgcca
2401	ctcccactgt	cctttcctaa	taaaatgagg	aaattgcatc	gcattgtctg	agtaggtgtc
2461	attctattct	gggggggtggg	gtgggggcagc	acagcaaggg	ggaggattgg	gaagacaata
2521	gcaggcatgc	tgggggatgcg	gtgggctcta			

SEQ ID NO: 2

FIG. 13

1	ccattgcata	cgttgtatcc	atatcataat	atgtacattt	atattggctc	atgtccaaca
61	ttaccgccat	gttgacattg	attattgact	agttattaat	agtaatcaat	tacgggggtca
121	ttagttcata	gcccataatat	ggagttccgc	gttacataac	ttacggtaaa	tggcccgcct
181	ggctgaccgc	ccaacgaccc	ccgcccattg	acgtcaataa	tgacgtatgt	tcccatagta
241	acgccaatag	ggactttcca	ttgacgtcaa	tgggtggagt	atttacggta	aactgcccac
301	ttggcagtac	atcaagtgtg	tcatatgcca	agtacgcccc	ctattgacgt	caatgacggt
361	aaatggcccg	cctggcatta	tgcccagtac	atgaccttat	gggactttcc	tacttggcag
421	tacatctacg	tattagtcac	cgctattacc	atgggtgatgc	ggttttggca	gtacatcaat
481	gggctggtg	agcggtttga	ctcacgggga	tttccaagtc	tccaccccat	tgacgtcaat
541	gggagtttgt	tttggcacca	aaatcaacgg	gactttccaa	aatgtcgtaa	caactccgcc
601	ccattgacgc	aaatgggccc	taggcgtgta	cgggtgggagg	tctatataag	cagagctcgt
661	ttagtgaacc	gtcagatcgc	ctggagacgc	catccacgct	gttttgacct	ccatagaaga
721	caccggggacc	gatccagcct	ccgcggccgg	gaacgggtgca	ttggaacgcg	gattccccgt
781	gccaagagtg	agatctaagt	aagcttcctg	cATGCTGCTG	CTGCTGCTGC	TGCTGGGCCT
841	GAGGCTACAG	CTCTCCCTGG	GCATCATCCC	AGTTGAGGAG	GAGAACCCGG	ACTTCTGGAA
901	CCGCGAGGCA	GCCGAGGCC	TGGGTGCCGC	CAAGAAGCTG	CAGCCTGCAC	AGACAGCCGC
961	CAAGAACCTC	ATCATCTTCC	TGGGCGATGG	GATGGGGGTG	TCTACGGTGA	CAGCTGCCAG
1021	GATCCTAAAA	GGGCAGAAGA	AGGACAAACT	GGGCCTGAG	ATACCCCTGG	CCATGGACCG
1081	CTTCCCATAT	GTGGCTCTGT	CCAAGACATA	CAATGTAGAC	AAACATGTGC	CAGACAGTGG
1141	AGCCACAGCC	ACGGCCTACC	TGTGCGGGGT	CAAGGGCAAC	TTCCAGACCA	TTGGCTTGAG
1201	TGCAGCCGCC	CGCTTTAACC	AGTGCAACAC	GACACGCGGC	AACGAGGTCA	TCTCCGTGAT
1261	GAATCGGGCC	AAGAAAGCAG	GGAAGTCAGT	GGGAGTGTA	ACCACCACAC	GAGTGCAGCA
1321	CGCCTCGCCA	GCCGGCACCT	ACGCCCACAC	GGTGAACCGC	AACTGGTACT	CGGACGCCGA
1381	CGTGCCTGCC	TCCGCCCGCC	AGGAGGGGTG	CCAGGACATC	GCTACGCAGC	TCATCTCCAA
1441	CATGGACATT	GACGTGATCC	TAGGTGGAGG	CCGAAAGTAC	ATGTTTCGCA	TGGGAACCCC
1501	AGACCCTGAG	TACCCAGATG	ACTACAGCCA	AGGTGGGACC	AGGCTGGACG	GGAAGAATCT
1561	GGTGCAGGAA	TGGCTGGCGA	AGCGCCAGGG	TGCCCAGGAT	GTGTGGAACC	GCACTGAGCT
1621	CATGCAGGCT	TCCCTGGACC	CGTCTGTGAC	CCATCTCATG	GGTCTCTTTG	AGCCTGGAGA
1681	CATGAAATAC	GAGATCCACC	GAGACTCCAC	ACTGGACCCC	TCCCTGATGG	AGATGACAGA
1741	GGCTGCCCTG	CGCCTGCTGA	GCAGGAACCC	CCGCGGCTTC	TTCTCTTCG	TGGAGGGTGG
1801	TCGCATCGAC	CATGGTCATC	ATGAAAGCAG	GGCTTACCGG	GCACTGACTG	AGACGATCAT
1861	GTTCGACGAC	GCCATTGAGA	GGGCGGGCCA	GCTCACCAGC	GAGGAGGACA	CGCTGAGCCT
1921	CGTCACTGCC	GACCACTCCC	ACGTCTTCTC	CTTCGGAGGC	TACCCCTGTC	GAGGGAGCTC
1981	CATCTTCGGG	CTGGCCCCCTG	GCAAGGCCCG	GGACAGGAAG	GCCTACACGG	TCCTCCTATA
2041	CGGAAACGGT	CCAGGCTATG	TGCTCAAGGA	CGGCGCCCGG	CCGGATGTTA	CCGAGAGCGA
2101	GAGCGGGAGC	CCCGAGTATC	GGCAGCAGTC	AGCAGTGCCC	CTGGACGAAG	AGACCCACGC
2161	AGGCGAGGAC	GTGGCGGTGT	TCGCGCGCGG	CCGCGAGGCG	CACCTGGTTC	ACGGCGTGCA
2221	GGAGCAGACC	TTCATAGCGC	ACGTCATGGC	CTTCGCCGCC	TGCCTGGAGC	CCTACACCGC
2281	CTGCGACCTG	GCGCCCCCGG	CCGGCACCAC	CGACGCCGCG	CACCCGGGTT	AAcccggtggt
2341	ccccgcgttg	cttcctctgc	tggccgggac	atcaggtggc	ccccgctgaa	ttggaatcga
2401	tcagaattca	gtcgacgata	tctgatcacg	atctgatctg	ctgtgccttc	tagttgccag
2461	ccatctgttg	tttgcccctc	ccccgtgcct	tccttgaccc	tggaagggtgc	cactcccact
2521	gtcctttcct	aataaaatga	ggaaattgca	tcgcattgtc	tgagtaggtg	tcattctatt
2581	ctgggggggtg	gggtgggggca	gcacagcaag	ggggaggatt	gggaagacaa	tagcaggcat
2641	gctgggggatg	cgggtgggctc	ta			

FIG. 14

1	catcatcaat	aatatacccc	acaaagtaaa	caaaagttaa	tatgcaaata	agggttttaa
61	tttagggcgg	ggctactgct	gattggccga	gaaacgttga	tgcaaata	gtcacgacgc
121	acggctaacg	gtcgccgcgg	aggcgtggcc	tagccccgaa	gcaagtcgcg	gggctgatga
181	cgtataaaaa	agcggacttt	aaacccgga	acggccgatt	ttcccgcggc	cacgcccgga
241	tatgaggtaa	ttctgggcgg	atgcaagtga	aattaggtca	ttttggcgcg	aaaactgaat
301	gaggaagtga	aaagtgaaaa	ataccggtcc	cgcccagggc	ggaatatatta	ccgaggggccg
361	agagactttg	accgattacg	tgtgggtttc	gattgcggtg	ttttttcgcg	aatttccgcg
421	tccgtgtcaa	agtccggtgt	ttatgtcaca	gatcagctga	tccacagggg	atttaaacca
481	gtcgagcccc	tcaagaggcc	actcttgagt	gccagcgagt	agagatttct	ctgagctccg
541	ctcccagagt	gtgagaaaaa	tgagacacct	gcgcctcctg	cctggaactg	tgcccttgga
601	catggccgca	ttattgctgg	atgactttgt	gagtacagta	ttggaggatg	aactgcaacc
661	aactccgttc	gagctggggc	ccacacttca	ggacctctat	gatttggagg	tagatgccca
721	ggaggacgac	ccgaacgaag	atgctgtgaa	tttaatat	ccagaatctc	tgattcttca
781	ggctgacata	gccagcgaag	ctctacctac	tccacttcat	actccaactc	tgctacccat
841	acctgaattg	gaagaggagg	acgagttaga	cctccggtgt	tatgaggaag	gttttcctcc
901	cagcgattca	gaggacgaac	agggtgagca	gagcatggct	ctaactctcag	actatgcttg
961	tgtggttgtg	gaagagcatt	ttgtgttgga	caatcctgag	gtgcccgggc	aaggctgtaa
1021	atcctgccag	taccaccggg	ataagaccgg	agacacgaac	gcctcctgtg	ctctgtgtta
1081	catgaaaaag	aacttcagct	ttatttacag	taagtggagt	gaatgtgaga	gaggctgagt
1141	gcttaagaca	taactgggtg	atgcttcaac	agctgtgcta	agtgtgggtt	attttggttc
1201	taggtccggt	gtcagaggat	ggtcatcacc	ctcagaagaa	gaccaccctg	gtccccctga
1261	tctgtcaggc	gaaacgcccc	tgcaagtgca	cagaccacc	ccagtcagac	ccagtggcga
1321	gagggcagca	gctgttgaaa	aaattgagga	cttggtacat	gacatgggtg	gggatgaacc
1381	tttggacctg	agcttgaaac	gtcccaggaa	actaggcgca	gctgcgctta	gtcatgtgta
1441	aataaagttg	tacaataaaa	attatatgtg	acgcatgcaa	ggtgtgggtt	atgactcatg
1501	ggcggggcct	agttctatat	aagtggcaac	acctgggcac	tgagacacag	accttcaggg
1561	agttcctgat	ggatgtgtgg	actatccttg	cagactttag	caagacacgc	cggcttgtag
1621	aggatagttc	agacgggtgc	tccgggttct	ggagacactg	gtttggaact	cctctatctc
1681	gcctgggtgta	cacagttaaa	aaggattata	acgaggaatt	tgaaaatctt	tttgctgatt
1741	gctctggcct	gctagattct	ctgaatctcg	gccaccagtc	ccttttccag	gaaagggtag
1801	tccacagcct	tgatttttcc	agcccagggc	gcactacagc	cgggggttgct	tttggtgttt
1861	ttctgggtga	caaatggagc	cagaacaccc	aactgagcag	gggctacatt	ctggacttcg
1921	cagccatgca	cctgtggagg	gcatgggtca	ggcagcgggg	acagagaatc	ttgaactact
1981	ggcttctaca	gccagcagct	ccgggtcttc	ttcgtctaca	cagacaaaca	tccatgttgg
2041	aggaagaaat	gaggcaggcc	atggacgaga	acccgaggag	cggctctggac	cctccgtcgg
2101	aagaggagtt	ggattgaatc	aggtatccag	cctgtaccca	gagcttagca	aggtgctgac
2161	atccatggcc	aggggagtg	agagggagag	gagcgatggg	ggcaataaccg	ggatgatgac
2221	cgagctgacg	gccagtctga	tgaatcgcaa	gcgccagag	cgccttacct	ggtacgagct
2281	acagcaggag	tgcaaggatg	agttgggcct	gatgcaggat	aaatatggcc	tgagcagat
2341	aaaaacccat	tggttgaacc	cagatgagga	ttgggaggag	gctattaaga	agtatgcca
2401	gatagccctg	cgcccagatt	gcaagtacat	agtgaccaag	accgtgaata	tcagacatgc
2461	tgctacatct	cggggaacgg	ggcagagggt	gtcattgata	ccctggacaa	ggccgccttt
2521	aggtgttgca	tgatgggaat	gagagccgga	gtgatgaata	tgaattccat	gatctttatg
2581	aacatgaagt	tcaatggaga	gaagttaaat	ggggtgctgt	tcatggccaa	cagccacatg
2641	accctgcatg	gctgcgactt	tttcggcctt	aacaatatgt	gcgcagagg	ctggggcgct
2701	tccaagatca	ggggatgtaa	gttttatggc	tgctggatgg	gcgtggtcgg	aagacccaag
2761	agcgagatgt	ctgtgaagca	gtgtgtgttt	gagaaatgct	acctgggagt	ctctaccgag
2821	ggcaatgcta	gagtgaggca	ctgctcttcc	ctggagacgg	gctgcttctg	cctggtgaag
2881	ggcacagcct	ctctgaagca	taatatgggtg	aagggtgca	cggatgagcg	catgtacaac
2941	atgctgactg	cgactcgggg	gtctgtcata	tcctgaagaa	catccatgtg	acctcccacc
3001	ccagaaagaa	gtggccagtg	tttgagaata	acatgctgat	caagtgccac	atgcacctgg
3061	gcgccagaag	gggcaccttc	cagccgtacc	agtgcactt	tagccagacc	aagctgctgt
3121	tgagaaacga	tgcttctctc	agggtgaacc	tgaacggcat	ctttgacatg	gatgtctcgg
3181	tgtacaagat	cctgagatac	gatgagacca	agtcagggt	gcgcgcttgc	gagtgcgggg
3241	gcagacacac	caggatgcag	ccagtggccc	tggtatgtgac	cgaggagctg	agaccagacc
3301	acctggtgat	ggcctgtacc	gggaccgagt	tcagctccag	tggggaggac	acagattaga
3361	ggtaggtttg	agtagtgggc	gtggctaagg	tgactataaa	ggcgggtgtc	ttacgagggt
3421	ctttttgctt	ttctgcagac	atcatgaacg	ggaccggcgg	ggccttcgaa	ggggggcttt
3481	ttagccctta	tttgacaacc	cgcctgccag	gatgggcccg	agttcgtcag	aatgtgatgg
3541	gatcgacggg	ggacggggcg	ccagtgcctc	cagcaaattc	ctcgaccatg	acctacgcga
3601	ccgtggggaa	ctcgtcgctt	gacagaccg	ccgcagccgc	ggcagccgca	gccgccatga
3661	cagcgacgag	actggcctcg	agctacatgc	ccagcagcag	cagtagcccc	tctgtgcccc

FIG. 15A-1

3721	gttccatcat	cgccgaggag	aactgctggc	cctgctggcc	gagctggaag	ccctgagccg
3781	ccagctggcc	gccctgaccc	agcaggtgtc	cgagctccgc	gaacagcagc	agcaaaataa
3841	atgattcaat	aaacacatat	tctgattcaa	acagcaaagc	atctttatta	tttatttttt
3901	cgcgcgcggt	aggccctggt	ccacctctcc	cgatcattga	gagtgcggtg	gattttttcc
3961	aagacccggt	agaggtggga	ttggatgttg	aggtacatgg	gcatgagccc	gtcccggggg
4021	tggaggtagc	accactgcat	ggcctcgtgc	tctggggtcg	tgttgtagat	gatccagtca
4081	tagcaggggc	gctgggcgtg	gtgctggatg	atgtccttga	ggaggagact	gatggccacg
4141	gggagccct	tgggtgtaggt	gttggcaaag	cggttgagct	gggagggatg	catgcggggg
4201	gagatgatgt	gcagtttggc	ctggatcttg	aggttggcga	tgttgccacc	cagatcccgc
4261	cggggggttca	tgttggtgcag	gaccaccagg	acggtgtagc	ccgtgcactt	ggggaactta
4321	tcatgcaact	tgggaaggga	tgcgtggaag	aatttggaag	cgcccttggtg	cccgccccagg
4381	ttttccatgc	actcatccat	gatgatggcg	atgggcccgt	gggctgcggc	tttggcaaag
4441	acgtttctgg	ggtcagagac	atcataatta	tgtcctggg	tgagatcatc	ataagacatt
4501	ttaatgaatt	ttgggcgagg	ggtgccagat	tgggggacga	tggtttccct	cgggcccccg
4561	ggcgaagttc	ccctcgcaga	tctgcatctc	ccaggctttc	atctcggagg	gggggatcat
4621	gtccacctgc	ggggcgatga	aaaaaacggt	ttccggggcg	ggggtgatga	gctgcgagga
4681	gagcaggttt	ctcaacagct	gggacttgcc	gcaccggtc	gggcccgtaga	tgaccccgat
4741	gacgggttgc	aggtggtagt	tcaaggacat	gcagctgccg	tcgtcccgga	ggaggggggc
4801	cacctcgttg	agcatgtctc	taacttggag	gttttcccgg	acgagctcgc	cgaggaggcg
4861	gtccccgccc	agcgagagga	gctcttgcat	ggaagcaaag	tttttcaggg	gcttgagtcc
4921	gtcggccatg	ggcatcttgg	cgagggtctg	cgagaggagt	tcgagacgtc	ccagagctcg
4981	gtgacgtgct	ctacggcatc	tcgatccagc	agacttcctc	gtttcggggg	ttgggacgac
5041	tgcgactgta	gggcacgaga	cgatgggctg	ccagcgcggc	cagcgtcatg	tccttccagg
5101	gtctcagggt	ccgctgagg	gtggtctccg	tcacggtgaa	ggggtggggc	cctggctggg
5161	cgcttgcaag	ggtgcgcttg	agactcatcc	tgtggtgct	gaaacgggca	cggtcttcgc
5221	cctgcgcgtc	ggcgagatag	cagttgacca	tgagctcgta	ggtgagggcc	tcggcggcgt
5281	ggcccttggc	gcgagagctt	cccttgggaag	agcgtccgca	ggcgggacag	aggagggatt
5341	gcagggcgta	gagcttgggc	gcaagaaaga	ccgactcggg	agcaaaagcg	tcgcctccgc
5401	agtgggcgca	gacggtctcg	cactcgacga	gccaggtag	ctcgggctgc	tcgggggtcaa
5461	aaaccagttt	tcccccgctc	tttttgatgc	gcttcttacc	tcgcgtctcc	atgagtctgt
5521	gtccgcgctc	ggtgacaaac	aggctgtcgg	tgtccccgta	gacggacttg	attggcctgt
5581	cctgcagggg	cgtcccgcgg	tcctcctcgt	agagaaactc	ggaccactct	gagacaaagg
5641	cgcgcggtcca	cgccaagaca	aaggaggcca	cgtgcgaggg	gtagcggctc	ttgtccacca
5701	gggggtccac	cttttccacc	gtgtgcagac	acatgtcccc	ttcctccgca	tccaagaagg
5761	tgattggctt	gtaggtgtag	gccacgtgac	caggggtccc	cgacgggggg	gtataaaagg
5821	gggcggtct	gtgctcgtcc	tcactctctt	ccgcgtcgtc	gtccacgagc	gccagctgtt
5881	ggggtaggta	ttccctctcg	agagcgggca	tgacctcggc	actcaggttg	tcagtttcta
5941	gaaacgagga	ggatttgatg	ttggcttgcc	ctgccgcaat	gcttttttagg	agactttcat
6001	ccatctggtc	agaaaagact	atttttttat	tgtcaagctt	ggtggcaaag	gagccataga
6061	gggcggttga	gagaagcttg	gcgatggatc	tcatggtctg	atttttgtca	cggtcggcgc
6121	gctccttggc	cgcgatgttg	agctggacat	attcgcgcgc	gacacacttc	cattcgggga
6181	agacggtggt	gcgctcgtcg	ggcacgatcc	tgacgcgcca	gccgcggtta	tgcagggtga
6241	ccagggtccac	gctggtggcc	acctcggcgc	gcaggggctc	gtagtccag	cagagtctgc
6301	cgcccttgcg	cgagcagaac	gggggcagca	catcaagcag	atgctcgtca	gggggggtccg
6361	catcgatggt	gaagatgccg	ggacagagtt	tcttgtcaaa	atagtctatt	tttgaggatg
6421	catcatccaa	ggccatctgc	cactcgcggg	cggccattgc	tcgctcgtag	gggttgaggg
6481	gcggacccca	cggcatggga	tgcgtgaggg	cggaggcgta	catgccgcaa	atgtcgtaaa
6541	catagatggg	ctccgagaag	atgccgatgt	tgggtgggata	acagcgcccc	ccgcggatgc
6601	tggcgcgcac	gtattcatac	aactcgtgcg	aggggccaag	aaggccgggg	ccgaaatttg
6661	tgcgctgggg	ctgctcggcg	cggaaaacaa	tctggcgaaa	gatggcgtgc	gagttggagg
6721	agatggtggg	ccgttgggaag	atgttaaagt	gggcgtgggg	caagcggacc	gagtcgcgga
6781	tgaagtgcgc	gtaggagtct	tgcagcttgg	cgacgaactc	ggcggtgacg	agaacgtcca
6841	tggcgagta	gtccagcgtt	tcgcggatga	tgtcataacc	cgcctctcct	ttcttctccc
6901	acagctcgcg	gttgaggggcg	tattcctcgt	catccttcca	gtactcccgg	agcgggaatc
6961	ctcgatcgtc	cgcacggtaa	gagcccagca	tgtagaaatg	gttcacggcc	ttgtagggac
7021	agcagccctt	ctccacgggg	agggcgtaag	cttgtgcggc	cttgcggagc	gaggtgtgcg
7081	tcagggcgaa	ggtgtccctg	accatgactt	tcaagaactg	gtacttgaaa	tcagagtcgt
7141	cgcagccgcc	gtgctcccat	agctcgaaat	cgggtgcgctt	cttcgagagg	gggttaggca
7201	gagcgaaagt	gacgtcattg	aagagaatct	tgcctgctcg	cggcatgaaa	ttgcgggtga
7261	tgcggaaagg	gcccgggacg	gaggctcggg	tgttgatgac	ctgggcgggc	aggacgatct
7321	cgtcgaagcc	gttgatgttg	tgcccagcga	tgtagagttc	catgaatcgc	gggcggcctt
7381	tgatgtgcgg	cagctttttg	agctcctcgt	aggtgaggtc	ctcggggcat	tgcaggccgt

FIG. 15A-2

7441	gctgctcgag	cgcccattcc	tggagatgtg	ggttggcttg	catgaaggaa	gcccagagct
7501	cgcgggccat	gagggctctg	agctcgctcg	gaaagaggcg	gaactgctgg	cccacggcca
7561	tcttttcggg	tgtgacgcag	tagaaggtga	gggggtcccg	ctcccagcga	tcccagcgta
7621	agcgcgcggc	tagatcgcca	gcaagggcga	ccagctcttg	gtcccccgag	aatttcatga
7681	ccagcatgaa	ggggacgagc	tgcttgccga	aggaccccat	ccaggtgtag	gtttctacat
7741	cgtaggtgac	aaagagccgc	tccgtgcgag	gatgagagcc	gattgggaag	aactggattt
7801	cctgccacca	gttgacgag	tggctgttga	tgtgatgaaa	gtagaaatcc	cgccggcgaa
7861	ccgagcactc	gtgctgatgc	ttgtaaaagc	gtccgcagta	ctcgacgagc	tgcacgggct
7921	gtacctcatc	cacgagatac	acagcgcgtc	ccttgaggag	gaacttcagg	agtggcgggc
7981	ctggctggtg	gttttcatgt	tcgcctgcgt	gggactcacc	ctggggctcc	tcgaggacgg
8041	agaggctgac	gagcccgcgc	gggagccagg	tccagatctc	ggcgcgggcg	ggcgcgagag
8101	cgaagacgag	ggcgcgcgag	tgggagctgt	ccatggtgtc	gcgagatcc	aggccggggg
8161	gcagggttct	gaggttgacc	tcgtagaggc	gggtgagggc	gtgcttgaga	tgcagatggt
8221	acttgatttc	tacgggtgag	ttgggtggccg	tgccacgca	ttgcatgagc	ccgtagctgc
8281	gcggggccac	gaccgtgccg	cggtgcgctt	ttagaagcgg	tgtcgcgagc	gcgctcccgg
8341	cggcagcggc	ggttccggcc	ccgcgggcag	ggcgggcaga	ggcacgtcgg	cgtggcgctc
8401	gggcaggctc	cggtgttgcg	ccctgagagc	gctggcggtc	gcgacgagcg	ggcggttgac
8461	atcctggatc	tgccgcctct	gcgtgaagac	cactggcccc	gtgactttga	acctgaaaga
8521	cagttcaaca	gaatcaatct	cggcgtcatt	gacggcgggc	tgacgcagga	tctcttgac
8581	gtcgcccag	ttgtcctggt	aggcgatctc	ggacatgaac	tgtctgatct	cctcctcctg
8641	gagatcgccg	cgaccgcgcg	gctccacggg	ggcggcgagg	tcattcgaga	tgcgacccat
8701	gagctgcgag	aaggcgccca	ggcgctctc	gttccagacg	cggctgtaga	ccacgtcccc
8761	gtcggcgtcg	cgcgcgcgca	tgaccacctg	cgcgagggtg	agctccacgt	gccgcgcgaa
8821	gacggcgtag	ttgcgcaggc	gctggaagag	gtagttgagg	gtggtggcga	tgtgctcggt
8881	gacgaagaag	tacatgatcc	agcggcgcag	gggcatctcg	ctgatgtcgc	cgatggcctc
8941	cagcctttcc	atggcctcgt	agaaatccac	ggcgaagtgt	aaaaactggg	cgttgcgggc
9001	cgagaccgtg	agctcgtctt	ccaggagcct	gatgagctcg	gcgatggtgg	cgcgcacctc
9061	gcgctcgaaa	tccccggggg	cctcgtcctc	tccctcttct	tccatgacaa	cctcttctat
9121	ttcttctct	gggggcggtg	gtggtggcgg	ggcccagcga	cgacggcgac	gcaccgggag
9181	acggtcgacg	aagcgctcga	tcattctccc	gcggcggcga	cgcattggtt	cggtgacggc
9241	gcgaccccgt	tcgcgaggac	gcagcgtgaa	gacgcgcgcg	gtcatctccc	ggtaatgggg
9301	cgggtccccg	ttgggcagcg	agagggcgct	gacgatgcat	cttatcaatt	gcggtgtagg
9361	ggacgtgagc	gcgtcgagat	cgaccggatc	ggagaatctt	tcgaggaaaag	cgtctagcca
9421	atcgagtcg	caaggtaagc	tcaaacacgt	agcagccctg	tggacgctgt	tagaattgcg
9481	gttgctaattg	atgtaattga	agtaggcgtt	tttgaggcgg	cggatggtgg	cgaggaggac
9541	caggtccttg	ggtcccgcct	gctggatgcg	gagccgctcg	gccatgcccc	aggcctggcc
9601	ctgacaccgg	cttaggttct	tgtagtagtc	atgcatgagc	ctctcgatgt	catcactggc
9661	ggaggcgag	tcttccatgc	gggtgacccc	gacgcccctg	agcggctgca	cgagcgccag
9721	gtcggcgacg	acgcgctcgg	cgaggatggc	ctgttgacag	cgggtgaggg	tgtcctggaa
9781	gtcgctccatg	tcgacgaagc	ggtggtaggg	ccctgtgttg	atggtgtaag	tgcagttggc
9841	catgagcgac	cagttgacgg	tctgcaggcc	gggctgcacg	acctcgaggt	acctgagccg
9901	cgagaaggcg	cgcgagtcga	agacgtagtc	ggtgcagggt	cgcacaaggt	actggtatcc
9961	gactaggaag	tgcggcgggc	gctggcggtg	gagcgggccg	cgctgggtgg	ccggcgcgcc
10021	cgggggccagg	tcctcgagca	tgaggcggtg	gtagccgtag	aggtagcggg	acatccagggt
10081	gatgccggca	gcggtggtgg	aggcgcgcg	gaactcgcg	acgcggttcc	agatgttgcg
10141	cagcggcagg	aaatagtcca	tggtcggcac	ggtctggccg	gtgagacgcg	cgcagtcatt
10201	gacgctctag	aggcaaaaac	gaaagcggtt	gagcgggctc	ttcctccgta	gcctggcgga
10261	acgcaaacgg	gttagggcgc	gcgtgtaccc	cggttcgagt	cccctcgaat	caggctggag
10321	ccgcgactaa	cgtgggtattg	gcactcccg	ctcgaccgga	gcccgatagc	cgccaggata
10381	cgcggggaaga	gccctttttg	ccggccgarg	ggagtgccta	gacttgaaag	cgcccgaaaa
10441	ccccgccggg	tagtggtctg	cgcccgtagt	ctggagaagc	atcgccaggg	ttgagtcgcg
10501	gcagaaccgg	gttcgcggac	ggccgcggcg	agcgggactt	ggtcaccgcc	ccgatttaaa
10561	gaccacagc	cagccgactt	ctccagttac	gggagcgagc	cccctttttt	ctttttgcca
10621	gatgcattcc	gtcctgcgcc	aaatgcgtcc	cacccccccg	gcgaccaccg	cgaccgcggc
10681	cgtagcaggc	gccggcgcta	gccagccaca	gccacagaca	gagatggact	tggaaagagg
10741	cgaagggtctg	gcgagactgg	gggcgccttc	cccggagcga	cacccccgcg	tgcagctgca
10801	gaaggacgtg	cgcccgcggt	acgtgcctgc	gcaaaacctg	ttcagggacc	gcagcgggga
10861	ggagccccgag	gagatgcgcg	actgccgggt	tcgggcgggg	agggagctgc	gcgagggcct
10921	ggaccgccag	cgcggtgctgc	gcgacgagga	tttcgagccg	aacgagcaga	cggggatcag
10981	ccccgcgcgc	gcgcacgtgg	cggcggccaa	cctggtgacg	gcctacgagc	agacggtgaa
11041	gcaggagcgc	aacttccaaa	agagtttcaa	caaccatgtg	cgcaccctga	tcgcgcgcga
11101	ggaggtggcc	ctgggcctga	tgcacctgtg	ggacctggcg	gaggccatcg	tgcagaacct

FIG. 15A-3

11161	ggacagcaag	cctctgacgg	cgcagctgtt	cctggtggta	cagcacagca	gggacaacga
11221	ggcgttcagg	gagggcgctgc	taaacatcgc	cgagcccag	ggtcgctggc	tgctggagct
11281	gatcaacatc	ttgcagagca	tcgtagttca	ggagcgcagc	ctgagcttgg	ccgagaagg
11341	ggcggcaatc	aactactcgg	tgcttagcct	gggcaagttt	tacgcgcgca	agatttacia
11401	gacgccgtac	gtgcccatag	acaaggaggt	gaagatagac	agctttttaca	tgcgcatggc
11461	gctcaagggtg	ctgacgctga	gcgacgacct	gggcgtgtac	cgcaacgacc	gcatccacaa
11521	ggccgtgagc	gcgagccggc	ggcgcgagct	gagcgaccgc	gagctgatgc	tgagcctg
11581	ccgggcgctg	gtagggggcg	ccgccggcg	cgaggagtcy	tacttcgaca	tgggggcgga
11641	cctgcattgg	cagccgagcc	ggcgcgcctt	ggaggccg	tacggtccag	aggacttgg
11701	tgaggaagag	gaagaggagg	aggatgcacc	cgctgcgggg	tactgacgcc	tccgtgatgt
11761	gttttttagat	gcagcaagcc	ccggaccccg	ccataagggg	ggcgctgcaa	agccagccgt
11821	ccggtctagc	atcgagcagc	tgaggaggtg	cgatgcaacg	catcatggcc	ctgacgaccc
11881	gcaaccccg	gtccttttaga	caacagccgc	aggccaacag	actctcgcc	attctggagg
11941	cgggtgggtccc	ttctcggacc	aacccacgc	acgagaaggt	gctggcgatc	gtgaacgcgc
12001	tgggcgagaa	caaggccatc	cgtcccagc	aggccgggct	agtgtacaac	gccctgctgg
12061	agcgcgtagg	ccgctacaac	agcacaacg	tgagtccaa	cctggaccgg	ctggtgacgg
12121	acgtgcgcga	agccgtggcg	cagcgcgagc	ggttcaagaa	cgagggcctg	ggctcgctgg
12181	tgggcgctgaa	cgccttcctg	gcgacgcagc	cggcgaacgt	gccgcgcggg	caggatgatt
12241	acaccaactt	tatcagcgcg	ctgcggctga	tggtgaccga	ggtgccccag	agcgagggtgt
12301	accagtcggg	cccggactac	tttttccaaa	ctagcagaca	gggcctgcaa	acggtgaacc
12361	tgagccaggc	tttcaagaac	ctgcgcgggc	tgtggggcgt	gcagggcgcc	gtgggcgacc
12421	ggtcgacgggt	gagcagcttg	ctgacgcca	actcgcggct	gctgctgctg	ctgatcgcg
12481	ccttcaccga	cagtggcagc	gtaaaccgca	actcgtacct	gggtcacctg	ctaacgctgt
12541	accgcgaggc	cataggccag	gcgaggtgg	acgagcagac	cttccaggag	atcactagcg
12601	tgagccgcgc	gctggggcag	aacgacaccg	acagtctgag	ggccaccctg	aacttcttgc
12661	tgaccaatag	acagcagaag	atcccggcgc	agtacgcgct	gtcggccgag	gaggagcgca
12721	tcctgagata	tgtgcagcag	agcgtagggc	ttttcctgat	gcaggagggg	gccactccca
12781	gcgcccgcgt	ggacatgacc	gcgcgcaaca	tggaacctag	catgtacgcc	gccaacgggc
12841	cgtttatcaa	taagctaattg	gactacctgc	atcgcgcggc	gtccatgaac	tcggactact
12901	ttaccaatgc	cattttgaac	ccgcactggc	ttccgcgcgc	ggggttctat	acgggcgagt
12961	acgacatgcc	cgaccccaac	gacgggtttt	tgtgggacga	cgtggacagc	gcggtgtttt
13021	caccgacctt	gcaaaagcgc	caggaggcgg	tgcgcacgcc	cgcgagcgag	ggcgcggtgg
13081	gtcggagccc	ctttcctagc	ttagggaggt	tgcatagctt	gccgggctct	gtgaacagcg
13141	gcaggggtgag	ccggccgcgc	ttgctggg	aggacgagta	cctgaacgac	tcgctgctgc
13201	agccgcgcgc	ggtcaagaac	gccatggcca	ataacgggat	agagagtctg	gtggacaaac
13261	tgaaccgctg	gaagacctac	gctcaggacc	atagggagcc	tgcccccgcg	ccgcggcgac
13321	agcgcacaga	ccggcagcgc	ggcctggtgt	gggacgacga	ggactcggcc	gacgatagca
13381	gcgtgttgga	cttggggcgg	agcgggtggg	tcaacccgat	atcgcgcac	ctgcagccca
13441	aactggggcg	acggatgttt	tgaatgcaaa	ataaaactca	ccaaggccat	agcgtgcgtt
13501	ctcttccttg	ttagagatga	ggcgtgcggt	ggtgtcttcc	tctcctcctc	cctcgtagca
13561	gagcgtgatg	gcgcaggcga	ccctggaggt	tccgtttgtg	cctccgcggt	atatggctcc
13621	tacggagggc	agaaacagca	ttcgttactc	ggagctggct	ccgttgtagc	acaccactcg
13681	cgtgtacttg	gtggacaaca	agtcggcgga	catcgcttcc	ctgaactatc	aaaacgacca
13741	cagcaacttc	ctgaccacgg	tggtgcagaa	caacgatttc	acccccgcgc	aggctagcac
13801	gcagacgata	aattttgacg	agcggctcgc	gtggggcggt	gatctgaaga	ccattctgca
13861	caccaacatg	cccaatgtga	acgagtacat	gttcaccagc	aagtttaagg	cgcgggtgat
13921	ggtggctaga	aaacacccac	agggggtaga	agcaacagat	ttaagcaagg	atatcttaga
13981	gtatgagtgg	tttgagttta	ccctgcccga	gggcaacttt	tccgagacca	tgaccataga
14041	cctgatgaac	aacgccatct	tggaaaacta	cttgcaagtg	gggcggcaaa	atggcgtgct
14101	ggagagcgat	attggagtca	agtttgacag	cagaaatttc	aagctgggct	gggaccctgt
14161	gaccaagctg	gtgatgccag	gggtctacac	ctacgaggcc	tttcacccgc	acgtgggtgt
14221	gctgccgggc	tgccgggtgg	acttcacaga	gagccgcctg	agcaacctcc	tgggcattcg
14281	caagaagcaa	cctttccaag	agggcttcag	aatcatgtat	gaggatctag	aagggggcaa
14341	catccccgcc	ctgctggatg	tgcccaagta	cttggaagc	aagaagaagt	tagaggaggc
14401	attggagaat	gctgctaaag	ctaattggtcc	tgcaagagga	gacagttagc	tctcaagaga
14461	ggttgaaaag	gcagctgaaa	aagaacttgt	tattgagccc	atcaagcaag	atgataccaa
14521	gagaagttac	aacctcatcg	aggggaacct	ggacacgctg	taccgcagct	ggtacctgtc
14581	ctatacctac	cgggaccctg	agaacggggt	gcagtcgtgg	acgctgctca	ccaccccgga
14641	cgtcacctgc	ggcgcggagc	aagtctactg	gtcgctgccg	gacctcatgc	aagaccccg
14701	caccttccgt	tctaccagc	aagtcagcaa	ctaccccggtg	gtcggcgccg	agctcatgcc
14761	cttcgcgcgc	aagagctttt	acaacgacct	cgcgctctac	tcccagctca	tccgcagcta
14821	cacctccctc	acccacgtct	tcaaccgctt	ccccgacaac	cagatcctct	gccgtccgc

FIG. 15A-4

14881	cgcgcccacc	atcaccaccg	tcagtgaaaa	cgtgcctgct	ctcacagatc	acgggacgct
14941	accgctgcgc	agcagtatcc	gcggagtcca	gcgagtgacc	gtcactgacg	cccgtcgccg
15001	cacctgtccc	tacgtctaca	aggccctggg	catagtcgcg	ccgcgtgtgc	tttccagtcg
15061	caccttctaa	aaaatgtcta	ttctcatctc	gccagcaat	aacaccggct	ggggtattac
15121	taggcccagc	agcatgtacg	gaggagccaa	gaaacgtccc	agcagcaccc	cgcccgctc
15181	cgcgccact	tccgcgctcc	gtggggcgct	tacaagcgcg	ggcggactgc	caccgccgcc
15241	gccgtgcgca	ccaccgtcga	cgacgtcatc	gactcggtgg	tcgccgacgc	gcgcaactat
15301	actcccggcc	cttcgaccgt	ggacgcggtt	cattgacagc	gtggtggcga	cgcggcggcg
15361	atatgccaga	cgcaagagcc	ggcggggcga	cggatcgccc	aggcgccatt	cggagcacgc
15421	ccgccatggg	gcgccgcccc	agctctgctg	cgccgcgcca	gacgcacggg	ccgccggggc
15481	atgatgcgag	ccgcgcgccc	cgccgccact	gcaccccccg	caggcaggac	tcgcagacga
15541	gcggccgccc	ccgcgcgccc	ggccatctct	agcatgacca	gaccaggcg	cggaaacgtg
15601	tactgggtgc	gcgactccgt	cacgggcgtg	cgcggtcccc	tgcgcacccg	tcctcctcgt
15661	ccctgatcta	atgcttgtgt	cctccccgcg	aagcgacgat	gtcaaagcgc	atctacaaga
15721	gagatgctcc	aggtegtcgc	cccggagatt	tacggaccac	cccaggcgga	ccagaaaccc
15781	cgcaaaatca	agcgggttaa	aaaaaaggat	gaggtggacg	agggggcagt	agagtttgtg
15841	cgcgagttcg	ctccgcggcg	gcgcgtaaat	tggaaggggc	gcaggtgcac	gcgtgttgcg
15901	gcccggcacg	gcggtgggtg	tcacgcccgg	cgagcggtcc	tcggtcagga	gcaagcgtag
15961	ctatgacgag	gtgtacggcg	acgacgacat	cctggaccag	gcggcagagc	gggcggggcg
16021	gtttgcctac	gggaagcggg	cgcgcaaga	ggagctgac	tcgctgccgc	tggacgagag
16081	caatcccacg	ccgagcctga	agcccgtagc	ctgcagcagg	tgttgcccca	ggcggtgctg
16141	ctgccgagcc	gcgggatcaa	gcgcgagggc	gagaacatgt	acccgaccat	gcagatcatg
16201	gtgcccagc	gccggcgcg	ggaggaagtg	ctggacaccg	tgaaaatgga	tgtggagccc
16261	gaggtcaagg	tgcgccccat	caagcagggt	gcgcccgggc	tgggctgca	gaccgtggac
16321	attcagatcc	ccaccgacat	ggatgtcgac	aaaaaacctt	cgaccagcat	cgaggtgcag
16381	accgaccctt	ggctcccagc	ctccaccgct	accgcttcca	cttctaccgt	cgccacggtc
16441	accgagcctc	ccaggaggcg	aagatggggc	cccgcccaacc	ggctgatgcc	caactacgtg
16501	ttgcatcctt	ccattatccc	gacgccgggc	taccgcggca	cccggtaact	cgccagccgc
16561	aggcgcccag	ccagcaaacc	ccgccgcgcg	accgccaccc	gccgccgtct	gccccccgcc
16621	cgcggtgcgc	gcgtaaccaa	cgcgccgggg	ccgctcgctc	gttctgcca	ccgtgcgcta
16681	ccaccccagc	atcctttaa	ccgtgtgctg	tgatactgtt	gcagagagat	ggctctcact
16741	tgcgcctgc	gcatccccgt	tccgaattac	cgaggaagat	cccgccgcag	gagaggcatg
16801	gcaggcagcg	gcctgaaccg	ccgccggcgg	cgggccatgc	gcaggcgcct	gagtgccggc
16861	tttctgcccg	cgctcatccc	cataatcgcg	gcggccatcg	gcacgatccc	gggcatagct
16921	tccgttgcg	tgcaggcgct	gcagcgccgt	tgatgtgcga	ataaagcctc	tttagactct
16981	gacacacctg	gtcctgtata	tttttagaat	ggaagacatc	aattttgctg	ccctggctcc
17041	gcggcacggc	acgcggccgt	tcattgggac	ctggaacgag	atcggcacca	gccagctgaa
17101	cgggggcgcc	ttcaattgga	gcagtgtctg	gagcgggctt	aaaaatttcg	gctcgacgct
17161	ccggacctat	gggaacaagg	cctggaatag	tagcacgggg	cagttgttga	gggaaaagct
17221	caaagaccag	aacttccagc	agaagggtgt	ggacggcctg	gcctcgggca	ttaacggggg
17281	ggtggacatc	gcgaaccagg	cagtgcagcg	cgagataaac	agccgtcttg	acccgcggcc
17341	gcccacgggtg	gtggagatgg	aagatgcaac	tcttccgccc	ccgaagggcg	agaagcggcc
17401	gcggccagat	gcggaggaga	cgatcctgca	ggtggacgag	ccgccttcgt	acgaggaggc
17461	cgtgaaggcc	ggcatgccc	ccacgcgcac	catcgcgcca	ctggccacgg	gtgtaatgaa
17521	acccgccacc	cttgacctgc	ctccaccacc	cacgcccgtt	ccaccgaagg	cagctccggt
17581	tgtgcagccc	cctccgggtg	cgaccgcgct	gcgcccgcgt	cccgcccgcc	gccaggccca
17641	gaactggcag	agcacgctgc	acagtattgt	gggcctggga	gtgaaaagtc	tgaagcgccg
17701	ccgatgctat	tgagagagag	gaaggaggac	actaaaggga	gagcttaact	tgtatgtgcc
17761	ttaccgccag	agaacgcgcg	aagatggcca	ccccctcgat	gatgccgcag	tgggcgtaca
17821	tgcacatcgc	cgggcaggac	gcctcggagt	acctgagccc	gggtctgggt	cagtttgccc
17881	gcgccaccga	cacgtacttc	agcctgggca	acaagttag	gaacccacag	gtggccccga
17941	cccacgatgt	gaccacggac	cggctcccagc	gtctgacgct	gcgctttgtg	cccgtggatc
18001	gcgaggacac	cacgtactcg	tacaaggcgc	gcttcaactct	ggccgtgggc	gacaaccggg
18061	tgctagacat	ggccagcacg	tactttgaca	tccgcggcgt	cctggaccgc	ggtcccagtt
18121	tcaaacccta	ctcgggcacg	gcttacaaca	gccttgcccc	caagggcgct	cccaatccca
18181	gtcagtgggt	tgccaaagaa	aatggtcagg	gaactgataa	gacacatact	tatggctcag
18241	ctgccatggg	aggaagcaac	atcaccattg	aaggtttagt	aattggaact	gatgaaaaag
18301	ctgaggatgg	caaaaaagat	atttttgcaa	ataaacttta	tcagccagaa	cctcaagtag
18361	gtgaagaaaa	ctggcaagag	tctgaagcct	tctatggagg	cagagctctt	aagaaagaca
18421	caaaaatgaa	gccctgctat	ggctcatttg	caagacctac	caatgaaaaa	ggcggacaag
18481	ctaaatttaa	gccagtggaa	gaggggcagc	aacctaaaga	ttatgacata	gatttggttt
18541	tctttgacac	acctggaggc	accatcacag	gaggcacaga	cgaagaatat	aaagcagaca

FIG. 15A-5

18601	ttgtgttgta	cactgaaaat	gtcaaccttg	aaaccccaga	cacccacgtg	gtatacaagc
18661	caggaaaaga	ggatgacagt	tcagaagtaa	atttgacaca	gcagtccatg	cccaacagggc
18721	ctaactacat	tggcttcaga	gacaactttg	tgggactcat	gtactacaac	agtactggca
18781	acatgggtgt	gctggctggg	caggcctctc	aattgaatgc	tgtggctcgac	ttgcaagaca
18841	gaaacaccga	gctgtctttac	cagctcttgc	tagattctct	gggtgacaga	accagatact
18901	tcagcatgtg	gaactctgcg	gtggatagct	atgatccaga	tgtcaggatc	attgaaaatc
18961	atgggtgtgga	agatgaactt	ccaaactatt	gcttccccatt	gaatggcact	ggcaccaatt
19021	caacatatct	tggcgtaaag	gtgaaaccag	atcaagatgg	tgatgttgaa	agcgagtggg
19081	ataaagatga	taccattgca	aggcagaatc	aaatcgccaa	gggcaacgtc	tttgccatgg
19141	agatcaacct	ccaggccaac	ctgtggaaga	gttttctgta	ctcgaacgtg	gccttgatcc
19201	tgcccgaactc	ctacaagtac	acgcccggcca	atgttacgct	gcccggccaac	accaacacct
19261	acgagtacat	gaacggccgc	gtggtagccc	cctcgctggg	ggacgcctac	atcaacatag
19321	gcgcccgatg	gtcgctggac	cccatggaca	acgtcaaccc	cttcaaccac	caccgcaatg
19381	cgggcctgcg	ctaccgctcc	atgcttctgg	gcaacggccg	ctacgtgccc	ttccacatcc
19441	aagtgccccca	aaagtctctt	gccatcaaga	acctgctcct	gctcccgggc	tcctacacct
19501	acgagtggaa	cttccgcaag	gatgtcaaca	tgatcctgca	gagttccctc	ggcaacgacc
19561	tgcgcgtcga	cggcgcctcc	gtccgcttcg	acagcgtcaa	cctctacgcc	accttcttcc
19621	ccatggcgca	caacaccgcc	tccaccctgg	aagccatgct	gcgcaacgac	accaacgacc
19681	agtccttcaa	cgactacctc	tgggccgcca	acatgctcta	ccccatcccg	gccaaggcca
19741	ccaacgtgcc	catctccatc	ccctcgcgca	actggggccgc	ttttcgcggc	tggagtttca
19801	cccgtctgaa	aaccaaggaa	actccctccc	tcggctcggg	ttttgacccc	tactttgtct
19861	actcgggctc	gatcccctac	cttgacggac	ccttttacct	taaccacacc	ttcaagaaag
19921	tctccatcat	gttcgactcc	tcggtcagct	ggcccggcaa	cgaccggctg	ctcacgccga
19981	acgagttcga	gatcaagcgc	agcgtcgacg	gggaaggcta	caacgtggcc	caatgcaaca
20041	tgaccaagga	ctggttcctc	gtccagatgc	tctcccacta	caacatcggc	taccagggct
20101	tccacgtgcc	cgagggtac	aaggaccgca	tgtactcctt	cttccgcaac	ttccagccca
20161	tgagcaggca	ggtggtcgat	gagatcaact	acaaggacta	caaggccgtc	accctgccct
20221	tccagcacaa	caactcgggc	ttcaccggct	accttgaccc	caccatgcgc	caaggggcagc
20281	cctaccccgc	caacttcccc	tacccgctca	tcggccagac	agccgtgcca	tcgctcacc
20341	agaaaagtct	cctctgcgac	agggtcagtg	ggcgcatccc	cttctccagc	aacttcatgt
20401	ccatggggcg	cttcaccgac	ctgggtcaga	acatgttcta	cgccaactcg	gcccacgcgc
20461	tcgacatgac	cttcgagggtg	gaccccatgg	atgagccac	cgtcctctat	cttctcttcg
20521	aagtgttcga	cgtgggtcaga	gtgcaccagc	cgcaccgcgg	cgtcatcgag	gccgtctacc
20581	tgcgcacgcc	gttctccgcc	ggaaacgcca	ccacctaaag	atgagcggct	ccagcgaaag
20641	agagctcgcg	tccatcgtgc	gcgacctggg	ctgcgggcct	actttttggg	cacccacgac
20701	acagcgattc	ccgggctttc	ttgccggcga	caagctggcc	tgcgccattg	tcaacacggc
20761	cggccgcgag	accggaggcg	tgcactggct	cgccttcggc	tggaaacccgc	gctcgcgcac
20821	ctgctacatg	ttcgacccct	ttgggttctc	ggaccgcccgc	ctcaagcaga	tttacagctt
20881	cgagtacgag	gccatgctgc	gccgaagcgc	cgtggcctct	tcgcccagac	gctgtctcag
20941	cctcgaacag	tccaccacga	ccgtgcaggg	gcccgaactcc	gccgcctgcg	gacttttctg
21001	ttgcatgttc	ttgcatgcct	tcgtgcactg	gcccgaaccga	cccatggacg	ggaacccac
21061	catgaacttg	ctgacggggg	tgcccaacgg	catgctacaa	tcgccacagg	tgctgcccac
21121	cctcaggcgc	aaccaggagg	agctctatcg	cttcctcgcg	cgccactccc	cttactttcg
21181	ctcccaccgc	gcccgcctcg	aacacgccac	cgtttttgac	aaaatgaaac	aactgcgtgt
21241	atctcaataa	acagcacttt	tattttacat	gcactggagt	atatgcaagt	tatttaaaag
21301	tcgaaggggt	tctcgcgctc	atcgttgtgc	gccgcgctgg	ggagggccac	gttgcggtac
21361	tgggtacttg	gctgccactt	gaactcgggg	atcaccagtt	tgggcactgg	ggtctcgggg
21421	aaggctctgc	tccacatacg	ccggctcatc	tgcagggcgc	ccagcatgtc	cggggcggat
21481	atcttgaaat	cgcagttggg	accggtgctc	tgcgcgcgcg	agttgcggta	cacgggggtg
21541	cagcactgga	acaccatcag	actgggggtac	tttacgctgg	ccagcacgct	cttgctcgctg
21601	atctgatect	tgtccagatc	ctcggcgctg	ctcacgccga	atgggggtcat	cttgccacagt
21661	tggcgaccca	ggaatggcac	gctctgaggc	ttgtgggttac	actcgcagtg	cacgggcatc
21721	agcatcatcc	ccgcgcgcgc	ctgcatattc	gggtagaggc	cttgacaaag	gccgtgatct
21781	gcttgaaagc	ttgttggggc	ttggccccct	cgtgaaaaaa	caggccgcag	ctcttcccgc
21841	tgaactgggt	attcccgcac	ccggcatcct	gcacgcagca	gcgcgcgtca	tggctgggtca
21901	gttgcaccac	gcttcttccc	cagcgggttct	gggtcacctt	ggctttgctg	ggttgctcct
21961	tcaacgcgcg	ctgcccgttc	tcgctgggtca	catccatctc	caccacgtgg	tccttggtgga
22021	tcataccggt	tccatgcaga	cacttgagct	ggccttccac	ctcgggtgcag	ccgtgatccc
22081	acagggcact	gccgggtgcac	tcccagttct	tgtgcgcgat	cccgtgtgtg	ctgaagatgt
22141	aaccttgcaa	gaggcgaccc	atgatgggtgc	taaagctctt	ctgggtgggtg	aagggttagtt
22201	gcagaccgcg	ggcctcctcg	ttcatccagg	tctggcacat	cttttggaag	atctcgggtct
22261	gctcggggcat	gagcttgtaa	gcacgcgcga	ggccgctgtc	gacgcggtaa	cgttccatca

FIG. 15A-6

22321	gcacgttcat	ggtatccatg	cccttttccc	aggacgagac	cagaggcaga	ctcaggggggt
22381	tgcgcacggt	caggacaccg	ggggctckcgg	gctcgacgat	acgtttttccg	tccttgcctt
22441	ccttcaacag	aaccggaggc	tggctgaatc	ccactcccac	aatcacggca	tcttctctggg
22501	gcatctcttc	gtcgggggtct	accttgggtca	catgcttgggt	ctttctgggt	tgcttctttt
22561	ttggaggggt	gtccacgggg	accacgtcct	ctcggaagac	ccggagccca	cccgctgata
22621	ctttcggcgc	ttgggtgggca	gaggaggtgg	cggcggcgag	gggtcctct	cgtgctccgg
22681	cggatagcgc	gccgaccctg	ggccccgggg	cggagtggcc	tctcgctcca	tgaaccggcg
22741	cacgtctgac	tgccgccggc	cattgtttcc	taggggaaga	tggaggagca	gccgcgtaag
22801	caggagcagg	aggaggactt	aaccacccac	gagcaacca	aatcgagca	ggacctgggc
22861	ttcgaagagc	cggctcgtct	agaaccccac	aggatgaaca	ggagcacgag	caagacgcag
22921	gccaggagga	gaccgacgct	gggtcgcgag	atggctacct	gggaggagag	gaggatgtgc
22981	tgctgaaaca	cctgcagcgc	cagtccctca	tcctccggga	cgccttggcc	gaccggagcg
23041	aaacccccct	cagcgtcgag	gagctgtgtc	gggcctacga	gctcaacctc	ttctcgccgc
23101	gcgtgcccc	caaacgccag	cccaacggca	cctgcgagcc	caacccgcgt	ctcaacttct
23161	atcccgtctt	tgcggtcccc	gaggcccttg	ccacctatca	catctttttc	aagaaccaa
23221	agatccccgt	ctcctgccgc	gccaaccgca	cccgcgccga	cgcgtcctc	gctctggggc
23281	ccggcgcgcg	catacctgat	attgcttccc	tggaagagt	cccaaatct	tcgaagggt
23341	cggtcgggac	gagacgcgcg	cggcgaaacg	ctctgaaaga	aacagcagag	gaagagggtc
23401	acactagcgc	cctggtagag	ttggaaggcg	acaacgccag	gctggccgtg	ctcaagcgca
23461	gcgttgagct	cacccacttc	gcctaccccc	ccgtcaacct	cccgcccaag	gtcatgctgc
23521	gcatcatgga	tcagctaata	atgccccaca	tcgaggccct	cgatgaaagt	caggagcagc
23581	gccccgagga	cacccggccc	gtggtcagcg	atgagcagct	tgcgcgctgg	cttgggtacc
23641	gcgaccccc	ggccctggag	cagcggcgca	agctcatgct	ggccgtgggt	ctgggtcacc
23701	tcgagctcga	atgcatgcga	cgctttttca	gcgaccccc	gacctgcgca	aggctcgagga
23761	gacctgcact	acacttttag	cacgtttcgt	caggcaggca	tgcaagatct	ccaacgtgga
23821	gctgaccaac	tggtctcctg	cctgggaatc	ctgcacgaga	accgcctggg	gcagacagtg
23881	ctccactcga	ccctgaaggg	cgaggcgcg	cgggactatg	tccgcgactg	cgtctttctc
23941	tttctctgcc	acacatggca	agctgccatg	ggcgtgtggc	agcagtgtct	cgaggacgag
24001	aacctgaagg	agctggacaa	gcttcttgct	agaaacctca	aaaagctgtg	gacgggcttt
24061	gacgagcgca	ccgtcgcttc	ggacctggcc	gagatcgctc	tccccgagc	gcctgaggca
24121	gacgctgaaa	ggcgggctgc	ccgacttcat	gagccagagc	atgttgcaaa	actaccgcac
24181	tttcattctc	gagcgatctg	ggatgctgcc	cgccacctgc	aacgccttcc	cctccgactt
24241	tgtcccgtg	agctaccgcg	agtgtcccc	gccgctgtgg	agccactgct	acctcttgca
24301	gctggccaac	tacatcgctt	accactcgga	tggtatcgag	gacgtgagcg	gcgaggggt
24361	gctagagtgc	cactgccgct	gcaacctgtg	ctctccgcac	cgctcctggg	ctgcaacccc
24421	cagctcctga	gcgagaccca	ggatcatcgt	accttcgagc	tgcaagggtc	gcaggagtcc
24481	accgctccgc	tgaaactcac	gccgggggtg	tggaacttcc	cgtacctgcg	caaatttgta
24541	cccaggact	accacgcccc	tgagataaag	ttcttcgagg	accaatcgcg	cccgcagcac
24601	gcggatctca	cggcctgcgt	catcacccag	ggcgcgatcc	tcgcccatt	gcacgccatc
24661	caaaaatccc	gccaaagagt	tcttttgaaa	aagggtagag	gggtctatct	ggacccccag
24721	acgggcgaag	tgctcaaccc	gggtctcccc	cagcatgccg	aagaagaaca	ggagccgcta
24781	gtggaagaga	tggaagaaga	atgggacagc	cagcagaaga	agacgaatgg	gaagaagaga
24841	cagaagaaga	agaattggaa	aagtggaga	agagcagcac	agacaccgtc	gccgcaccat
24901	ccgcgccgca	gcccggcggt	cacggataca	actcgagtc	cgccaaagctc	ctcgtagatg
24961	gatcgagtga	aggtgacggt	aagcacgagc	ggcaggggcta	cgaatcatgg	aggcccacaa
25021	agcgggatca	tcgcctgctt	gcaagactgc	gggggggaaca	tcgtttcgcc	cgccgctatc
25081	tgctcttcca	tcgcgggggtg	aacatcccc	gcaacgtgtt	gcattactac	cgtcaccttc
25141	acagctaaga	aaaaatcaga	gtaagaggag	tcgccggagg	aggcntgagg	atcgcggcga
25201	acgagccatt	gaccaccagg	gagctgagga	atcggtatctt	ccccactctt	tatgccattt
25261	ttcagcagag	tcgagggtcag	cagcaagagc	tcaaagtaaa	aaaccgggtct	ctgcgctcgc
25321	tcacccgcag	ttgcttgtac	cacaaaaacg	aagatcagct	gcagcgcact	ctcgaagacg
25381	ccgaggctct	gttccacaag	tactgcgcgc	tcactcttaa	agactaaggc	gcgcccaccc
25441	ggaaaaaagg	cgggaattac	ctcatcgcca	ccatgagcaa	ggagattccc	acccttaca
25501	tgtggagcta	tcagccccag	atgggcctgg	ccgcgggcgc	ctcccaggac	tactccaccc
25561	gcatgaactg	gctcagtgcc	ggcccctcga	tgatctcacg	ggtaaacggg	gtccgtaacc
25621	atcgaaacca	gatattgttg	gagcaggcgg	cggtcacctc	aacgcccagg	caaagctcaa
25681	cccgcgtaat	tgccctcca	ccctgggtga	tcaggaaatc	cccgggccga	ctaccgtact
25741	acttccgcgt	gacgcactgg	ccgaagtccg	catgactaac	tcagggtgtcc	agctggccgg
25801	cggcgcttcc	cgggtgccgc	tccgcccaca	atcgggtata	aaaaccctgg	tgatacgagg
25861	cagaggcaca	cagctcaacg	acgagttggg	gagctcttca	atcgggtctgc	gaccggacgg
25921	agtgttccaa	ctagccggag	cggggagatc	gtccttcaact	cccaaccagg	ctacctgacc
25981	ttgcagagca	gctcttcgga	gcctcgctcc	ggaggcatcg	gaaccctcca	gtttgtggag

FIG. 15A-7

26041	gagtttgtgc	cctcgggtcta	cttcaacccc	ttctcgggat	cgccaggcct	ctacccggac
26101	gagttcatac	cgaacttcga	cgcagtgaga	gaagcgggtg	acggccacga	ctgaatgtct
26161	tatggtgact	cggctgagct	cgctcggttg	aggcacctag	accactgccg	ccgcctgcgc
26221	tgcttcgccc	gggagagctg	cggacttata	tactttgagt	ttcccaggga	gcaccccaac
26281	ggccctgcac	acggagtgcg	gatcaccgta	gagggcacca	ccgagtctca	cctgggttagg
26341	ttcttcaccc	agcaaccctt	cctgggtcgag	cgggaccggg	gaggcaccac	ctacaccgtc
26401	tactgcatct	gtccaacccc	gaagttgcat	gagaattttt	gttgactctt	gtgtgctgag
26461	tttaataaaa	gctaaactcc	tacaatactc	tgggatcccc	tgtcgtcgca	ctcgcaacaa
26521	gaccttcaac	ctcaccaacc	agactgaggt	aaaattcaac	tgcagaccgg	gggacaaata
26581	catcctctgg	cttttttaaaa	acacttcctt	cgcagtctcc	aacgcctgcg	ccaacgacgg
26641	tattgaaata	cccaacaacc	ttaccagtgg	actaacttat	actaccagaa	agactaagct
26701	agtactctac	aatccttttg	tagagggaac	ctaccactgc	cagagcggac	cttgcttcca
26761	cactttcact	ttggtgaacg	ttaccgacag	cagcacagcc	gctacagaaa	catctaacct
26821	tctttttgat	actaacactc	ctaaaaccgg	aggtgagctc	tgggttccct	ctctaacaga
26881	ggggggtaaa	catattgaag	cgggttgggtg	tttgatttta	ggggtgggtc	tgggtgggtg
26941	catagcgggtg	ctgtattacc	ttccttgctg	gatcgaaatc	aaaatcttta	tctgctgggt
27001	cagacattgt	tgggaggaac	catgaagggg	ctcttgctga	ttatcctttc	cctgggtgggg
27061	ggtgtactgt	catgccacga	acagccacga	tgtaacatca	ccacaggcaa	tgagaggagt
27121	gtgatatgca	cagtagtcat	caaatgcgag	catacatgcc	ctctcaacat	cacattcaaa
27181	aaccgtacca	tgggaaatgc	atgggtgggc	gactgggaac	caggagatga	gcagaactac
27241	acggtcactg	tccatggtag	caatggaaat	cacacttttg	gtttcaaatt	catttttgaa
27301	gtcatgtgtg	atatcacact	gcatgtggct	agacttcatt	gcttggtggc	ccctaccaag
27361	gataacatgg	ttgggttttc	tttggctttt	gtgatcatgg	cctgtgcaat	gtcaggtctg
27421	ctggtagggg	ctttagtgtg	gttcctaaag	cgcaagccta	ggtatggaaa	tgaggagaag
27481	gaaaaattgc	tataaatctt	ttctcttcgc	agaaccatga	atacagtgat	ccgtatcgtg
27541	ctgctctctc	ttcttgtaac	ttttagtcat	gcaggattca	taccatcaat	gctacatggt
27601	gggctaatat	aacttttagtg	ggacctcaga	tattccagat	cacatgggat	gatagcactg
27661	gattgcaatt	ttgtgatgga	agtacagtta	agaatccaca	gatcagacat	agttgtaatg
27721	atcaaaaactt	aactctgatt	catgtgaaca	aaacccatga	aagaacatac	atgggctata
27781	ataagcagag	tactcataaa	gaagactata	aagtcacagt	tataccacct	cctcctgtta
27841	ctgtaaagcc	acaaccagag	ccagaatatg	tgtatgttaa	tatgggagag	aacaaaacct
27901	tagttggggc	tccaggaatt	ccagttagtt	ggtttaatca	ggatggttta	caattttgca
27961	ttggggataa	agtttttcat	ccagaattca	accacacctg	tgacatgcaa	aatcttacac
28021	tgttgtttat	aaatcttaca	catgatggag	cttatcttgg	ttataatcgc	caggggaactg
28081	aaagaacttg	gtatgagggt	gtagtgtcag	atgggttttc	aaaatcagaa	gagatgaagg
28141	tagaagacca	tagtaaagaa	acagaacaaa	aacagactgg	tcaaaaacaa	agtgaccata
28201	agcaggggtg	gcaaaaagaa	acaagtcaaa	agaaaactaa	tgacaaacaa	aagccatcgc
28261	gcaggaggcc	atctaaacta	aagccaaaca	cacctgacac	aaaactaatt	acagtcacta
28321	gtgggtcaaa	cgtaacttta	gttggtccag	atggaaaggt	cacttggtat	gatgatgatt
28381	taaaaagacc	atgtgagcct	gggtataagt	taggggtgta	gtgtgacaat	caaaacctaa
28441	ccctaataca	tgtaactaaa	ctttatgagg	gagtttacta	tgggtactaat	gacagaggca
28501	acagcaaaaag	atacagagta	aaagtaaaca	ctactaattc	tcaaagtgtg	aaaattcagc
28561	cgtacaccag	gcctactact	cctgatcaga	aacacagatt	tgaattgcaa	attgattcta
28621	atcaagacaa	aattccatca	actactgtgg	caatcgtggg	gggagtgatc	gcgggctttg
28681	taactctaata	cattattttc	atatgctaca	tctgctgccg	caagcgtccc	aggtcataca
28741	atcatatggg	agaccacta	ctcagcttct	cttactgaaa	ctcagtcact	ctcatttcag
28801	aaccatgaag	gctttcacag	cttgcggtct	gattagcata	gtcacactta	gttcagctgc
28861	aatgattaat	gttaatgtca	ctagaggtgg	taaaattaca	ttgaatggga	cttatccaca
28921	aactacatgg	acaagatatc	ataaagatgg	atggaaaaat	atttgtgaat	ggaatgttac
28981	tgcatacaaa	tgcttcaata	atggaagcat	tactattact	gccactgcc	acattacttc
29041	tggcacatac	aaagctgaaa	gctataaaaa	tgaaattaaa	aaattaacct	ataaaaaacaa
29101	caaaaccaca	tttgaagatt	ctggaaatta	tgagcatcaa	aaattatctt	tttatatggt
29161	gacaataatt	gaactgccta	caaccaaggc	acccaccaca	gttagtaca	ctacacagtc
29221	aactgttaag	accactactc	acactacaca	gctagacacc	acagtgcaga	ataatactgt
29281	gttggttagg	tattttgttg	gggaggaaa	tactactgaa	cagacagagg	ctacctcaag
29341	tgcctttatc	agcactgcaa	atttaacttc	gcttgcttgg	actaatgaaa	ccggagtatc
29401	attgatgcat	ggccagcctt	actcaggttt	ggatattcaa	attacttttc	tgggtgtctg
29461	tgggatcttt	attcttgtgg	ttcttctgta	ctttgtctgc	tgtaaagcca	gaaagaaatc
29521	taggaggccc	atctacaggc	cagtgattgg	ggaacctcag	ccactccaag	tggatggagg
29581	cttaaggaat	cttcttttct	cttttacagt	atgggtgatca	gccatgattc	ctagttcttc
29641	ctatttaaca	tcctcttctg	tctcttcaac	atctgtgctg	cctttgcggc	agtttcgcac
29701	gcctcgcccc	actgtctagg	gcctttcccc	acctactcct	ctttgccctg	ctcacctgca

FIG. 15A-8

29761	cctgcgtctg	cagcattgtc	tgccctggtea	tcaccttcct	gcagctcatc	gactgggtgct
29821	gcgcgcgcta	caattacttc	atcatagtc	cgaatacagg	gacgagaacg	tagccagaat
29881	tttaaggctc	atatgaccat	gcagactctg	ctcatactgc	tatcgctctt	atcccatgcc
29941	ctcgctactg	ctgattactc	taaatgcaaa	ttggcggaca	tatggaattt	cttagactgc
30001	tatcaggaga	aaattgatat	gccctcctat	tacttgggtga	ttgtgggaat	agttatggtc
30061	tgctcctgca	ctttctttgc	catcatgatc	taccctgtgt	ttgatcttgg	atggaactct
30121	gttgaggcat	tcacatacac	actagaaagc	agttcactag	cctccacgcc	accacccaca
30181	ccgcctcccc	gcagaaatca	gtttcccatg	attcagtact	tagaagagcc	ccctccccga
30241	cccccttcca	ctgttagcta	ctttcacata	accggcggcg	atgactgacc	accacctgga
30301	cctcgagatg	gacggccagg	cctccgagca	gcgcacccctg	caactgcgcg	tccgtcagca
30361	gcaggagcgt	gccgcccaagg	agctcctcga	tgccatcaac	atccaccagt	gcaagaaggg
30421	catcttctgc	ctgggtcaaac	aggcaaagat	cacctacgag	ctcgtgtcca	acggcaaaca
30481	gcatcgctc	acctatgaga	tgccccagca	gaagcagaag	ttcacctgca	tggtgggctg
30541	caaccccata	gtcatcacc	agcagtcggg	cgagaccaac	ggctgcatcc	actgctcctg
30601	cgaaagcccc	gagtgtatct	actcccttct	caagaccctt	tgccgactcc	gcgacctcct
30661	cccatgaac	tgatgttgat	taaaaaccaa	aaaaaacaat	cagccccctt	ccctatccca
30721	aattactcgc	aaaaataaat	cattggaact	aatcatttaa	taaagatcac	ttacttgaaa
30781	tctgaaagta	tgtctctggg	gtagttgttc	agcagcacct	cggtagccctc	ctcccaactc
30841	tggtactcca	gtctccggcg	ggcggcggaac	tttctccaca	ccttgaaagg	gatgtcaa
30901	tcctgggtcca	caattttcat	tgtcttccct	ctcagatgtc	aaagaggctc	cgggtggaag
30961	atgacttcaa	ccccgtctac	ccctatggct	acgcgcggaa	tcagaatata	cccttcctca
31021	ctccccctt	tgtctcctcc	gatggattca	aaaacttccc	ccctgggggtc	ctgtcactca
31081	aactggctga	cccaatcacc	atagccaatg	gtgatgtctc	actcaagggtg	ggagggggac
31141	ttactttgca	agaaggaagt	atgactgtag	accctaaggc	tcccttgcaa	cttgcaaa
31201	ataaaaaact	tgagcttggt	tatgttgatc	catttgaggt	tagtgccaat	aaacttagtt
31261	taaaagtagg	acatggatta	aaaatattag	atgacaaaag	tgctggaggg	ttgaaagatt
31321	taattggcaa	acttgtgggt	ttaacaggga	aaggaatagg	cactgaaaat	ttgcaaaata
31381	cagatggtag	cagcagagga	attgggtataa	gtgtaagagc	aagagaaggg	ttaacatttg
31441	acaatgatgg	atacttggtg	gcatggaacc	caaagtatga	cacgcgcaca	ctttgggaca
31501	caccagacac	atctccta	tgaggattg	ataaggagaa	ggattcaaaa	ctcactttgg
31561	tacttacaaa	gtgtggaagt	caaataattag	ctaattgtgtc	tttgattgtg	gtgtcaggaa
31621	aatatcaata	catagaccac	gctacaaatc	caactcttaa	atcattttaa	ataaaaactt
31681	tttttgataa	taaagggtga	cttctcccaa	gttcaaacct	tgattccaca	tattggaact
31741	ttagaagtga	caatttaact	gtatctgagg	catataaaaa	tgagttgaa	tttatgccta
31801	atttggtagc	ctacccaaaa	cctaccactg	gctctaaaaa	atatgcaagg	gatatagtct
31861	atgggaacat	atatcttgga	ggtttggcat	atcagccagt	tgtaattaag	gttactttta
31921	atgaagaagc	agatagtgtc	tactctataa	catttgaatt	tgtatggaat	aaagaatatg
31981	ccagggttga	atttgaaacc	acttccttta	ccttctccta	tattgcccc	caataaaaaga
32041	ccaataaacg	tgttttttat	ttcaaatttt	atgtatcttt	attgattttt	acaccagcgc
32101	gagtagtcaa	tctcccacca	ccagcccat	tcacagtgtg	cacggttctc	tcagcacggg
32161	ggccttaaat	aaggaaatgt	tctgattatt	gcgggaactg	gacttggggg	ctataatcca
32221	cacagtttcc	tgacgagcca	aacggggatc	ggtgattgaa	atgaagccgt	cctctgaaaa
32281	gtcatccaag	cgggcctcac	agtccagggtc	acagtctggg	ggaacgagaa	gaacgcacag
32341	attcatactc	ggaaaacagg	atgggtctgt	gcctctccat	cagcgcctc	agcagtctct
32401	gccgcggggg	ctcggtgcgg	ctgctgcaaa	tgggatcggg	atcacaagtc	tctctaacta
32461	tgatcccaac	agccttcagc	atcagtctcc	tggtgcgtcg	agcacagcac	cgcacctga
32521	tctctgccat	gttctcacag	taagtgcagc	acataatcac	catgttatcc	agcagcccat
32581	aattcagggt	gctccagcca	aagctcatgt	tggggatgat	ggaacccacg	tgaccatcgt
32641	accagatgcg	gcagtataat	agggtgcctgc	ccctcatgaa	cacactgccc	atatacatga
32701	tctctttggg	catgtttctg	tttacaatct	ggcggtacca	ggggaagcgc	tggttgaa
32761	tgaccccgta	aatgactctc	ctgaaccaca	cggccagcag	ggtgcctccc	gcccgaact
32821	gcaggagacc	aggggatgaa	cagtggcaat	gcaggatcca	gcgctcgta	ccgctcacca
32881	tctgagctct	taccaagtcc	agggtagcgg	ggcacaggca	cactgacata	catcttttta
32941	aaatttttat	ttcctctgtg	gtgaggatca	tatcccaggg	gactggaaac	tcttgagca
33001	gggtaaagcc	agcagcacat	ggtaatccac	ggacagaact	tacattatga	taatctgcat
33061	gatcacaatc	gggcaacagg	ggatgttgat	cagtcatgta	agccctgggt	tcatcatcag
33121	atcgtggtaa	acgggccctg	cgatatggat	gatggcggag	cgagctggat	tgaatctcgg
33181	tttgcatgtg	agtggattct	cttgcgtaac	ttgtcgtact	tctgccagca	gaaatggg
33241	cttgaacagc	atataccct	cctgcggccg	tcctttcgtc	gctgccgctc	agtcacccaa
33301	ctgaagtaca	tccattctcg	aagattctgg	agaagttcct	ctgcatctga	tgaataaaaa
33361	aaccgtcca	tgcgaaatcc	cctcatcaca	tcagccagga	ctctgtaggc	catccccatc
33421	cagttaatgc	tgccctgtct	atcattcaga	gggggcgggtg	gcaggattgg	aagaaccatt

FIG. 15A-9

33481	tttattccaa	acggtctcga	aggacgataa	agtgcaagtc	acgcaggtga	cagcgttccc
33541	ctccgctgtg	ctggtggaaa	cagacagcca	ggtcaaaacc	cactctattt	tcaaggtgct
33601	cgaccgtggc	ttcgagcagt	ggctctacgc	gtacatccag	cataagaatc	acattaaagg
33661	ctggccctcc	atcgatttca	tcaatcatca	ggttacattc	ctgcaccatc	cccaggtaat
33721	tctcattttt	ccagccttgg	attatctcta	caaattggtg	gtgtaaatac	actccgcaca
33781	tgttgaaaag	ctcccacagt	gccccctcca	ctttcataat	caggcagacc	ttcataatag
33841	aaacagatcc	tgctgctcca	ccacctgcag	cgtgttcaaa	acaacaagat	tcaataaggt
33901	tctgccctcc	gccctgagct	cgcgcctcaa	tgtcagctgc	aaaaagtcac	ttaagtcctg
33961	ggccactaca	gctgacaatt	cagagccagg	gctaagcgtg	ggactggcaa	gcgtgaggga
34021	aaactttaat	gctccaaagc	tagcacccaa	aaactgcatg	ctggaataag	ctctctttgt
34081	gtctccggtg	atgccttcca	aaatgtgagt	gataaagcgt	ggtagttttt	tctttaatca
34141	tttgcgtaat	agaaaagtcc	tgtaaataag	tcactaggac	cccagggacc	acaatgtggt
34201	agcttacacc	gcgtcgctga	aagcatgggt	agtagagatg	agagtctgaa	aaacagaaag
34261	catgcgctaa	actaaggtgg	ctattttcac	tgaaggaaaa	atcactcttt	ccagcagcag
34321	ggtacccact	gggtggccct	tgcggacata	caaaaatcgg	tccgtgtgat	taaaaagcag
34381	cacagtaagt	tcctgtcttc	ttccggcaaa	aatcacatcg	gactgggtta	gtatgtccct
34441	ggcatggtag	tcattcaagg	ccataaatct	gccctgatat	ccagtaggaa	ccagcacact
34501	cacttttagg	tgaagcaata	ccaccccatg	cggaggaatg	tggaaagatt	cagggcaaaa
34561	aaaattatat	ctattgctag	cccttcctgg	acgggagcaa	tcctccagga	ctatctatga
34621	aagcatacag	agattcagcc	atagctcagc	ccgcttacca	gtagacaaag	agcacagcag
34681	tacaagcgcc	aacagcagcg	actgactacc	cactgactta	gctccctatt	taaaggcacc
34741	ttacactgac	gtaatgacca	aaggtctaaa	aaccccgcca	aaaaaacaca	cacgccctgg
34801	gtgtttttgc	gaaaacactt	ccgcgttctc	acttcctcgt	atcgatttcg	tgacttgact
34861	tccgggttcc	cacgttacgt	cacttttgcc	cttacatgta	acttagtcgt	agggcgccat
34921	cttgcccacg	tccaaaatgg	cttacatgtc	cagttacgcc	tccgcggcga	ccgttagccg
34981	tgcgtcgtga	cgtcatttgc	atcaacgttt	ctcggccaat	cagcagtagc	cccgccctaa
35041	attttaaacc	tcatttgcac	attaactttt	gtttactttg	tggggtatat	tattgatgat
35101	g					

FIG. 15A-10

PacI
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|     |             |            |            |              |            |
|-----|-------------|------------|------------|--------------|------------|
| 1   | TTCTTAATTA  | ACATCATCAA | TAATATACCT | TATTTTGGAT   | TGAAGCCAAT |
|     | AAGAATTAAT  | TGTAGTAGTT | ATTATATGGA | ATAAAACCTA   | ACTTCGGTTA |
| 51  | ATGATAATGA  | GGGGGTGGAG | TTTGTGACGT | GGCGCGGGGC   | GTGGGAACGG |
|     | TACTATTACT  | CCCCACCTC  | AAACACTGCA | CCGCGCCCCG   | CACCCTTGCC |
| 101 | GGCGGGTGAC  | GTAGTAGTGT | GGCGGAAGTG | TGATGTTGCA   | AGTGTGGCGG |
|     | CCGCCCACTG  | CATCATCACA | CCGCCTTCAC | ACTACAACGT   | TCACACCGCC |
| 151 | AACACATGTA  | AGCGACGGAT | GTGGCAAAAG | TGACGTTTTT   | GGTGTGCGCC |
|     | TTGTGTACAT  | TCGCTGCCTA | CACCGTTTTT | ACTGCAAAAA   | CCACACGCGG |
| 201 | GGTGTACACA  | GGAAGTGACA | ATTTTCGCGC | GGTTTTAGGC   | GGATGTTGTA |
|     | CCACATGTGT  | CCTTCACTGT | TAAAAGCGCG | CCAAAATCCG   | CCTACAACAT |
| 251 | GTAAATTTGG  | GCGTAACCGA | GTAAGATTTG | GCCATTTTCG   | CGGGAAAACT |
|     | CATTTAAACC  | CGCATTGGCT | CATTCTAAAC | CGGTAAAAGC   | GCCCTTTTGA |
| 301 | GAATAAGAGG  | AAGTGAAATC | TGAATAATTT | TGTGTTACTC   | ATAGCGCGTA |
|     | CTTATTCTCC  | TTCACTTTAG | ACTTATTAAA | ACACAATGAG   | TATCGCGCAT |
| 351 | ATATTTGTCT  | AGGGCCGCGG | GGACTTTGAC | CGTTTACGTG   | GAGACTCGCC |
|     | TATAAACAGA  | TCCCGGCGCC | CCTGAAACTG | GCAAATGCAC   | CTCTGAGCGG |
| 401 | CAGGTGTTTT  | TCTCAGGTGT | TTTCCGCGTT | CCGGGTCAAA   | GTTGGCGTTT |
|     | GTCCACAAAA  | AGAGTCCACA | AAAGGCGCAA | GGCCCAGTTT   | CAACCGCAAA |
| 451 | TATTATTATA  | GGCGGCCGCG | ATCCATTGCA | TACGTTGTAT   | CCATATCATA |
|     | ATAATAATAT  | CCGCCGGCGC | TAGGTAACGT | ATGCAACATA   | GGTATAGTAT |
| 501 | ATATGTACAT  | TTATATTGGC | TCATGTCCAA | CATTACCGCC   | ATGTTGACAT |
|     | TATACATGTA  | AATATAACCG | AGTACAGGTT | GTAATGGCGG   | TACAACGTGA |
| 551 | TGATTATTGA  | CTAGTTATTA | ATAGTAATCA | ATTACGGGGT   | CATTAGTTCA |
|     | ACTAATAACT  | GATCAATAAT | TATCATTAGT | TAATGCCCCA   | GTAATCAAGT |
| 601 | TAGCCCATAT  | ATGGAGTTCC | GCGTTACATA | ACTTACGGTA   | AATGGCCCGC |
|     | ATCGGGTATA  | TACCTCAAGG | CGCAATGTAT | TGAATGCCAT   | TTACCGGGCG |
| 651 | CTGGCTGACC  | GCCCAACGAC | CCCCGCCCAT | TGACGTCAAT   | AATGACGTAT |
|     | GACCGACTGG  | CGGGTTGCTG | GGGGCGGGTA | ACTGCAGTTA   | TTACTGCATA |
| 701 | GTTCCCATAG  | TAACGCCAAT | AGGGACTTTC | CATTGACGTC   | AATGGGTGGA |
|     | CAAGGGTATC  | ATTGCGGTTA | TCCCTGAAAG | GTAAC TG CAG | TTACCCACCT |
| 751 | G TATTTACGG | TAAACTGCCC | ACTTGGCAGT | ACATCAAGTG   | TATCATATGC |
|     | CATAAATGCC  | ATTTGACGGG | TGAACCGTCA | TGTAGTTCAC   | ATAGTATACG |

FIG. 16A-1

|      |             |             |             |             |            |
|------|-------------|-------------|-------------|-------------|------------|
| 801  | CAAGTACGCC  | CCCTATTGAC  | GTCAATGACG  | GTAAATGGCC  | CGCCTGGCAT |
|      | GTTTCATGCGG | GGGATAACTG  | CAGTTACTGC  | CATTTACCGG  | GCGGACCGTA |
| 851  | TATGCCCAGT  | ACATGACCTT  | ATGGGACTTT  | CCTACTTGGC  | AGTACATCTA |
|      | ATACGGGTCA  | TGTACTGGAA  | TACCCTGAAA  | GGATGAACCG  | TCATGTAGAT |
| 901  | CGTATTAGTC  | ATCGCTATTA  | CCATGGTGAT  | GCGGTTTTTG  | CAGTACATCA |
|      | GCATAATCAG  | TAGCGATAAT  | GGTACCACTA  | CGCCAAAACC  | GTCATGTAGT |
| 951  | ATGGGCGTGG  | ATAGCGGTTT  | GA CTCACGGG | GATTTCCAAG  | TCTCCACCCC |
|      | TACCCGCACC  | TATCGCCAAA  | CTGAGTGCCC  | CTAAAGGTTC  | AGAGGTGGGG |
| 1001 | ATTGACGTCA  | ATGGGAGTTT  | GTTTTGGCAC  | CAAATCAAC   | GGGACTTTCC |
|      | TA ACTGCAGT | TACCCTCAAA  | CAA AACCGTG | GTTTTAGTTG  | CCCTGAAAGG |
| 1051 | AAAATGTCGT  | AACA ACTCCG | CCCCATTGAC  | GCAAATGGGC  | GGTAGGCGTG |
|      | TTTTACAGCA  | TTGTTGAGGC  | GGGGTAACTG  | CGTTTACCCG  | CCATCCGCAC |
| 1101 | TACGGTGGGA  | GGTCTATATA  | AGCAGAGCTC  | GTTTAGTGAA  | CCGTCAGATC |
|      | ATGCCACCCT  | CCAGATATAT  | TCGTCTCGAG  | CAAATCACTT  | GGCAGTCTAG |
| 1151 | GCCTGGAGAC  | GCCATCCACG  | CTGTTTTGAC  | CTCCATAGAA  | GACACCGGGA |
|      | CGGACCTCTG  | CGGTAGGTGC  | GACAAA ACTG | GAGGTATCTT  | CTGTGGCCCT |
| 1201 | CCGATCCAGC  | CTCCGCGGCC  | GGGAACGGTG  | CATTGGAACG  | CGGATTCCCC |
|      | GGCTAGGTCTG | GAGGCGCCGG  | CCCTTGCCAC  | GTAACCTTGC  | GCCTAAGGGG |
| 1251 | GTGCCAAGAG  | TGAGATCTAC  | CATGGGTGCT  | AGGGCTTCTG  | TGCTGTCTGG |
|      | CACGGTTCTC  | ACTCTAGATG  | GTACCCACGA  | TCCCGAAGAC  | ACGACAGACC |
| 1301 | TGGTGAGCTG  | GACAAGTGGG  | AGAAGATCAG  | GCTGAGGCCT  | GGTGGCAAGA |
|      | ACCACTCGAC  | CTGTTCACCC  | TCTTCTAGTC  | CGACTCCGGA  | CCACCGTTCT |
| 1351 | AGAAGTACAA  | GCTAAAGCAC  | ATTGTGTGGG  | CCTCCAGGGA  | GCTGGAGAGG |
|      | TCTTCATGTT  | CGATTTCTGT  | TAACACACCC  | GGAGGTCCCT  | CGACCTCTCC |
| 1401 | TTTGCTGTGA  | ACCCTGGCCT  | GCTGGAGACC  | TCTGAGGGGT  | GCAGGCAGAT |
|      | AAACGACACT  | TGGGACCGGA  | CGACCTCTGG  | AGACTCCCCA  | CGTCCGTCTA |
| 1451 | CCTGGGCCAG  | CTCCAGCCCT  | CCCTGCAAAC  | AGGCTCTGAG  | GAGCTGAGGT |
|      | GGACCCGGTC  | GAGGTCGGGA  | GGGACGTTTG  | TCCGAGACTC  | CTCGACTCCA |
| 1501 | CCCTGTACAA  | CACAGTGGCT  | ACCCTGTACT  | GTGTGCACCA  | GAAGATTGAT |
|      | GGGACATGTT  | GTGTCACCGA  | TGGGACATGA  | CACACGTGGT  | CTTCTAACTA |
| 1551 | GTGAAGGACA  | CCAAGGAGGC  | CCTGGAGAAG  | ATTGAGGAGG  | AGCAGAACAA |
|      | CACTTCCTGT  | GGTTCCTCCG  | GGACCTCTTC  | TA ACTCCTCC | TCGTCTTGTT |

FIG. 16A-2

|      |                          |                          |                          |                          |                          |
|------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1601 | GTCCAAGAAG<br>CAGGTTCTTC | AAGGCCCAGC<br>TTCCGGGTCG | AGGCTGCTGC<br>TCCGACGACG | TGGCACAGGC<br>ACCGTGTCCG | AACTCCAGCC<br>TTGAGGTCGG |
| 1651 | AGGTGTCCCA<br>TCCACAGGGT | GAACTACCCC<br>CTTGATGGGG | ATTGTGCAGA<br>TAACACGTCT | ACCTCCAGGG<br>TGGAGGTCCC | CCAGATGGTG<br>GGTCTACCAC |
| 1701 | CACCAGGCCA<br>GTGGTCCGGT | TCTCCCCCCC<br>AGAGGGGGGC | GACCCTGAAT<br>CTGGGACTTA | GCCTGGGTGA<br>CGGACCCACT | AGGTGGTGGA<br>TCCACCACCT |
| 1751 | GGAGAAGGCC<br>CCTCTTCCGG | TTCTCCCCTG<br>AAGAGGGGAC | AGGTGATCCC<br>TCCACTAGGG | CATGTTCTCT<br>GTACAAGAGA | GCCCTGTCTG<br>CGGGACAGAC |
| 1801 | AGGGTGCCAC<br>TCCCACGGTG | CCCCCAGGAC<br>GGGGGTCCTG | CTGAACACCA<br>GACTTGTGGT | TGCTGAACAC<br>ACGACTTGTG | AGTGGGGGGC<br>TCACCCCCCG |
| 1851 | CATCAGGCTG<br>GTAGTCCGAC | CCATGCAGAT<br>GGTACGTCTA | GCTGAAGGAG<br>CGACTTCCTC | ACCATCAATG<br>TGGTAGTTAC | AGGAGGCTGC<br>TCCTCCGACG |
| 1901 | TGAGTGGGAC<br>ACTCACCCTG | AGGCTGCATC<br>TCCGACGTAG | CTGTGCACGC<br>GACACGTGCG | TGGCCCCATT<br>ACCGGGGTAA | GCCCCCGGCC<br>CGGGGGCCGG |
| 1951 | AGATGAGGGA<br>TCTACTCCCT | GCCCAGGGGC<br>CGGGTCCCCG | TCTGACATTG<br>AGACTGTAAC | CTGGCACCAC<br>GACCGTGGTG | CTCCACCCTC<br>GAGGTGGGAG |
| 2001 | CAGGAGCAGA<br>GTCCTCGTCT | TTGGCTGGAT<br>AACCGACCTA | GACCAACAAC<br>CTGGTTGTTG | CCCCCATCC<br>GGGGGGTAGG  | CTGTGGGGGA<br>GACACCCCCT |
| 2051 | AATCTACAAG<br>TTAGATGTTC | AGGTGGATCA<br>TCCACCTAGT | TCCTGGGCCT<br>AGGACCCGGA | GAACAAGATT<br>CTTGTTCTAA | GTGAGGATGT<br>CACTCCTACA |
| 2101 | ACTCCCCCAC<br>TGAGGGGGTG | CTCCATCCTG<br>GAGGTAGGAC | GACATCAGGC<br>CTGTAGTCCG | AGGGCCCCAA<br>TCCCGGGGTT | GGAGCCCTTC<br>CCTCGGGAAG |
| 2151 | AGGGACTATG<br>TCCCTGATAC | TGGACAGGTT<br>ACCTGTCCAA | CTACAAGACC<br>GATGTTCTGG | CTGAGGGCTG<br>GACTCCCGAC | AGCAGGCCTC<br>TCGTCCGGAG |
| 2201 | CCAGGAGGTG<br>GGTCCTCCAC | AAGAACTGGA<br>TTCTTGACCT | TGACAGAGAC<br>ACTGTCTCTG | CCTGCTGGTG<br>GGACGACCAC | CAGAATGCCA<br>GTCTTACGGT |
| 2251 | ACCCTGACTG<br>TGGGACTGAC | CAAGACCATC<br>GTTCTGGTAG | CTGAAGGCCC<br>GACTTCCGGG | TGGGCCCTGC<br>ACCCGGGACG | TGCCACCCTG<br>ACGGTGGGAC |
| 2301 | GAGGAGATGA<br>CTCCTCTACT | TGACAGCCTG<br>ACTGTCGGAC | CCAGGGGGTG<br>GGTCCCCCAC | GGGGGCCCTG<br>CCCCCGGGAC | GTCACAAGGC<br>CAGTGTTCCG |
| 2351 | CAGGGTGCTG<br>GTCCCACGAC | GCTGAGGCCA<br>CGACTCCGGT | TGTCCCAGGT<br>ACAGGGTCCA | GACCAACTCC<br>CTGGTTGAGG | GCCACCATCA<br>CGGTGGTAGT |

FIG. 16A-3

|      |                           |                          |                          |                           |                           |
|------|---------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 2401 | TGATGCAGAG<br>ACTACGTCTC  | GGGCAACTTC<br>CCCGTTGAAG | AGGAACCAGA<br>TCCTTGGTCT | GGAAGACAGT<br>CCTTCTGTCA  | GAAGTGCTTC<br>CTTCACGAAG  |
| 2451 | AACTGTGGCA<br>TTGACACCGT  | AGGTGGGCCA<br>TCCACCCGGT | CATTGCCAAG<br>GTAACGGTTC | AACTGTAGGG<br>TTGACATCCC  | CCCCCAGGAA<br>GGGGGTCCTT  |
| 2501 | GAAGGGCTGC<br>CTTCCCGACG  | TGGAAGTGTG<br>ACCTTCACAC | GCAAGGAGGG<br>CGTTCCTCCC | CCACCAGATG<br>GGTGGTCTAC  | AAGGACTGCA<br>TTCCTGACGT  |
| 2551 | ATGAGAGGCA<br>TACTCTCCGT  | GGCCAACTTC<br>CCGGTTGAAG | CTGGGCAAAA<br>GACCCGTTTT | TCTGGCCCTC<br>AGACCGGGAG  | CCACAAGGGC<br>GGTGTTCCCG  |
| 2601 | AGGCCTGGCA<br>TCCGGACCGT  | ACTTCCTCCA<br>TGAAGGAGGT | GTCCAGGCCT<br>CAGGTCCGGA | GAGCCACAG<br>CTCGGGTGTC   | CCCCTCCCGA<br>GGGGAGGGCT  |
| 2651 | GGAGTCCTTC<br>CCTCAGGAAG  | AGGTTTGGGG<br>TCCAAACCCC | AGGAGAAGAC<br>TCCTCTTCTG | CACCCCCAGC<br>GTGGGGGTCTG | CAGAAGCAGG<br>GTCTTCGTCC  |
| 2701 | AGCCCATTTGA<br>TCGGGTAACT | CAAGGAGCTG<br>GTTCTCGAC  | TACCCCTGG<br>ATGGGGGACC  | CCTCCCTGAG<br>GGAGGGACTC  | GTCCCTGTTT<br>CAGGGACAAA  |
| 2751 | GGCAACGACC<br>CCGTTGCTGG  | CCTCCTCCCA<br>GGAGGAGGGT | GTAAAATAAA<br>CATTTTATTT | GCCCGGGCAG<br>CGGGCCCGTC  | ATCTGCTGTG<br>TAGACGACAC  |
| 2801 | CCTTCTAGTT<br>GGAAGATCAA  | GCCAGCCATC<br>CGGTCGGTAG | TGTTGTTTGC<br>ACAACAAACG | CCCTCCCCCG<br>GGGAGGGGGC  | TGCCTTCCTT<br>ACGGAAGGAA  |
| 2851 | GACCCTGGAA<br>CTGGGACCTT  | GGTGCCACTC<br>CCACGGTGAG | CCACTGTCCT<br>GGTGACAGGA | TTCCTAATAA<br>AAGGATTATT  | AATGAGGAAA<br>TTRACTCCTTT |
| 2901 | TTGCATCGCA<br>AACGTAGCGT  | TTGTCTGAGT<br>AACAGACTCA | AGGTGTCATT<br>TCCACAGTAA | CTATTCTGGG<br>GATAAGACCC  | GGGTGGGGTG<br>CCCACCCCAC  |
| 2951 | GGGCAGGACA<br>CCCGTCCTGT  | GCAAGGGGGA<br>CGTTCCCCCT | GGATTGGGAA<br>CCTAACCCTT | GACAATAGCA<br>CTGTTATCGT  | GGCATGCTGG<br>CCGTACGACC  |
| 3001 | GGATGCGGTG<br>CCTACGCCAC  | GGCTCTATGG<br>CCGAGATACC | CCGATCGGCG<br>GGCTAGCCGC | CGCCGTACTG<br>GCGGCATGAC  | AAATGTGTGG<br>TTTACACACC  |
| 3051 | GCGTGGCTTA<br>CGCACCGAAT  | AGGGTGGGAA<br>TCCCACCCTT | AGAATATATA<br>TCTTATATAT | AGGTGGGGGT<br>TCCACCCCCA  | CTTATGTAGT<br>GAATACATCA  |
| 3101 | TTTGTATCTG<br>AAACATAGAC  | TTTTGCAGCA<br>AAAACGTCGT | GCCGCCGCCG<br>CGGCGGCGGC | CCATGAGCAC<br>GGTACTCGTG  | CAACTCGTTT<br>GTTGAGCAAA  |
| 3151 | GATGGAAGCA<br>CTACCTTCGT  | TTGTGAGCTC<br>AACACTCGAG | ATATTTGACA<br>TATAAACTGT | ACGCGCATGC<br>TGC GCGTACG | CCCCATGGGC<br>GGGGTACCCG  |

FIG. 16A-4

|      |            |             |            |            |             |
|------|------------|-------------|------------|------------|-------------|
| 3201 | CGGGGTGCGT | CAGAATGTGA  | TGGGCTCCAG | CATTGATGGT | CGCCCCGTCC  |
|      | GCCCCACGCA | GTCTTACACT  | ACCCGAGGTC | GTAACTACCA | GCGGGGCAGG  |
| 3251 | TGCCCCGCAA | CTCTACTACC  | TTGACCTACG | AGACCGTGTC | TGGAACGCCG  |
|      | ACGGGCGTTT | GAGATGATGG  | AACTGGATGC | TCTGGCACAG | ACCTTGCGGC  |
| 3301 | TTGGAGACTG | CAGCCTCCGC  | CGCCGCTTCA | GCCGCTGCAG | CCACCGCCCCG |
|      | AACCTCTGAC | GTCGGAGGCG  | GCGGCGAAGT | CGGCGACGTC | GGTGGCGGGC  |
| 3351 | CGGGATTGTG | ACTGACTTTG  | CTTTCCTGAG | CCCGCTTGCA | AACAGTGCAG  |
|      | GCCCTAACAC | TGACTGAAAC  | GAAAGGACTC | GGGCGAACGT | TTGTCACGTC  |
| 3401 | CTTCCCGTTC | ATCCGCCCGC  | GATGACAAGT | TGACGGCTCT | TTTGGCACAA  |
|      | GAAGGGCAAG | TAGGCGGGCG  | CTACTGTTCA | ACTGCCGAGA | AAACCGTGTT  |
| 3451 | TTGGATTCTT | TGACCCGGGA  | ACTTAATGTC | GTTTCTCAGC | AGCTGTTGGA  |
|      | AACCTAAGAA | ACTGGGCCCT  | TGAATTACAG | CAAAGAGTCG | TCGACAACCT  |
| 3501 | TCTGCGCCAG | CAGGTTTCTG  | CCCTGAAGGC | TTCTTCCCCT | CCCAATGCGG  |
|      | AGACGCGGTC | GTCCAAAGAC  | GGGACTTCCG | AAGGAGGGGA | GGGTTACGCC  |
| 3551 | TTTAAACAT  | AAATAAAAAA  | CCAGACTCTG | TTTGGATTTG | GATCAAGCAA  |
|      | AAATTTTGTA | TTTATTTTTT  | GGTCTGAGAC | AAACCTAAAC | CTAGTTCGTT  |
| 3601 | GTGTCTTGCT | GTCCTTTATTT | AGGGGTTTTG | CGCGCGCGGT | AGGCCC GGGA |
|      | CACAGAACGA | CAGAAATAAA  | TCCCCAAAAC | GCGCGCGCCA | TCCGGGCCCT  |
| 3651 | CCAGCGGTCT | CGGTCGTTGA  | GGGTCCTGTG | TATTTTTTCC | AGGACGTGGT  |
|      | GGTCGCCAGA | GCCAGCAACT  | CCCAGGACAC | ATAAAAAAGG | TCCTGCACCA  |
| 3701 | AAAGGTGACT | CTGGATGTTT  | AGATACATGG | GCATAAGCCC | GTCTCTGGGG  |
|      | TTTCCACTGA | GACCTACAAG  | TCTATGTACC | CGTATTCGGG | CAGAGACCCC  |
| 3751 | TGGAGGTAGC | ACCACTGCAG  | AGCTTCATGC | TGCGGGGTGG | TGTTGTAGAT  |
|      | ACCTCCATCG | TGGTGACGTC  | TCGAAGTACG | ACGCCCCACC | ACAACATCTA  |
| 3801 | GATCCAGTCG | TAGCAGGAGC  | GCTGGGCGTG | GTGCCTAAAA | ATGTCTTTCA  |
|      | CTAGGTCAGC | ATCGTCCTCG  | CGACCCGCAC | CACGGATTTT | TACAGAAAGT  |
| 3851 | GTAGCAAGCT | GATTGCCAGG  | GGCAGGCCCT | TGGTGTAAGT | GTTTACAAAG  |
|      | CATCGTTCGA | CTAACGGTCC  | CCGTCCGGGA | ACCACATTCA | CAAATGTTTC  |
| 3901 | CGGTTAAGCT | GGGATGGGTG  | CATACGTGGG | GATATGAGAT | GCATCTTGGA  |
|      | GCCAATTCGA | CCCTACCCAC  | GTATGCACCC | CTATACTCTA | CGTAGAACCT  |
| 3951 | CTGTATTTTT | AGGTGGGCTA  | TGTTCCAGC  | CATATCCCTC | CGGGGATTCA  |
|      | GACATAAAAA | TCCAACCGAT  | ACAAGGGTCG | GTATAGGGAG | GCCCCTAAGT  |

FIG. 16A-5



|      |                          |                          |                          |                           |                          |
|------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 4001 | TGTTGTGCAG<br>ACAACACGTC | AACCACCAGC<br>TTGGTGGTCG | ACAGTGTATC<br>TGTCACATAG | CGGTGCACTT<br>GCCACGTGAA  | GGGAAATTTG<br>CCCTTTAAAC |
| 4051 | TCATGTAGCT<br>AGTACATCGA | TAGAAGGAAA<br>ATCTTCCTTT | TGCGTGGAAG<br>ACGCACCTTC | AACTTGGAGA<br>TTGAACCTCT  | CGCCCTTGTG<br>GCGGGAACAC |
| 4101 | ACCTCCAAGA<br>TGGAGGTTCT | TTTTCCATGC<br>AAAAGGTACG | ATTCGTCCAT<br>TAAGCAGGTA | AATGATGGCA<br>TTRACTACCGT | ATGGGCCCAC<br>TACCCGGGTG |
| 4151 | GGGCGGCGGC<br>CCCGCCGCCG | CTGGGCGAAG<br>GACCCGCTTC | ATATTTCTGG<br>TATAAAGACC | GATCACTAAC<br>CTAGTGATTG  | GTCATAGTTG<br>CAGTATCAAC |
| 4201 | TGTTCCAGGA<br>ACAAGGTCCT | TGAGATCGTC<br>ACTCTAGCAG | ATAGGCCATT<br>TATCCGGTAA | TTTACAAAGC<br>AAATGTTTCG  | GCGGGCGGAG<br>CGCCCGCCTC |
| 4251 | GGTGCCAGAC<br>CCACGGTCTG | TGCGGTATAA<br>ACGCCATATT | TGGTTCCATC<br>ACCAAGGTAG | CGGCCCAGGG<br>GCCGGGTCCC  | GCGTAGTTAC<br>CGCATCAATG |
| 4301 | CCTCACAGAT<br>GGAGTGTCTA | TTGCATTTCC<br>AACGTAAAGG | CACGCTTTGA<br>GTGCGAAACT | G TTCAGATGG<br>CAAGTCTACC | GGGGATCATG<br>CCCCTAGTAC |
| 4351 | TCTACCTGCG<br>AGATGGACGC | GGGCGATGAA<br>CCCGCTACTT | GAAAACGGTT<br>CTTTTGCCAA | TCCGGGGTAG<br>AGGCCCCATC  | GGGAGATCAG<br>CCCTCTAGTC |
| 4401 | CTGGGAAGAA<br>GACCCTTCTT | AGCAGGTTCC<br>TCGTCCAAGG | TGAGCAGCTG<br>ACTCGTCGAC | CGACTTACCG<br>GCTGAATGGC  | CAGCCGGTGG<br>GTCGGCCACC |
| 4451 | GCCCGTAAAT<br>CGGGCATTTA | CACACCTATT<br>GTGTGGATAA | ACCGGCTGCA<br>TGGCCGACGT | ACTGGTAGTT<br>TGACCATCAA  | AAGAGAGCTG<br>TTCTCTCGAC |
| 4501 | CAGCTGCCGT<br>GTCGACGGCA | CATCCCTGAG<br>GTAGGGACTC | CAGGGGGGCC<br>GTCCCCCGG  | ACTTCGTTAA<br>TGAAGCAATT  | GCATGTCCCT<br>CGTACAGGGA |
| 4551 | GACTCGCATG<br>CTGAGCGTAC | TTTTCCCTGA<br>AAAAGGGACT | CCAAATCCGC<br>GGTTTAGGCG | CAGAAGGCGC<br>GTCTTCCGCG  | TCGCCGCCCA<br>AGCGGCGGGT |
| 4601 | GCGATAGCAG<br>CGCTATCGTC | TTCTTGCAAG<br>AAGAACGTTT | GAAGCAAAGT<br>CTTCGTTTCA | TTTTCAACGG<br>AAAAGTTGCC  | TTTGAGACCG<br>AAACTCTGGC |
| 4651 | TCCGCCGTAG<br>AGGCGGCATC | GCATGCTTTT<br>CGTACGAAAA | GAGCGTTTGA<br>CTCGCAAAC  | CCAAGCAGTT<br>GGTTCGTCAA  | CCAGGCGGTC<br>GGTCCGCCAG |
| 4701 | CCACAGCTCG<br>GGTGTGAGC  | GTCACCTGCT<br>CAGTGGACGA | CTACGGCATC<br>GATGCCGTAG | TCGATCCAGC<br>AGCTAGGTCG  | ATATCTCCTC<br>TATAGAGGAG |
| 4751 | GTTTCGCGGG<br>CAAAGCGCCC | TTGGGGCGGC<br>AACCCCGCCG | TTTCGCTGTA<br>AAAGCGACAT | CGGCAGTAGT<br>GCCGT CATCA | CGGTGCTCGT<br>GCCACGAGCA |

FIG. 16A-6

|      |             |             |             |            |            |
|------|-------------|-------------|-------------|------------|------------|
| 4801 | CCAGACGGGC  | CAGGGTCATG  | TCTTTCCACG  | GGCGCAGGGT | CCTCGTCAGC |
|      | GGTCTGCCCCG | GTCCCAGTAC  | AGAAAGGTGC  | CCGCGTCCCA | GGAGCAGTCG |
| 4851 | GTAGTCTGGG  | TCACGGTGAA  | GGGGTGCGCT  | CCGGGCTGCG | CGCTGGCCAG |
|      | CATCAGACCC  | AGTGCCACTT  | CCCCACGCGA  | GGCCCGACGC | GCGACCGGTC |
| 4901 | GGTGCGCTTG  | AGGCTGGTCC  | TGCTGGTGCT  | GAAGCGCTGC | CGGTCTTCGC |
|      | CCACGCGAAC  | TCCGACCAGG  | ACGACCACGA  | CTTCGCGACG | GCCAGAAGCG |
| 4951 | CCTGCGCGTC  | GGCCAGGTAG  | CATTTGACCA  | TGGTGTCATA | GTCCAGCCCC |
|      | GGACGCGCAG  | CCGGTCCATC  | GTAAACTGGT  | ACCACAGTAT | CAGGTCGGGG |
| 5001 | TCCGCGGCGT  | GGCCCTTGGC  | GCGCAGCTTG  | CCCTTGGAGG | AGGCGCCGCA |
|      | AGGCGCCGCA  | CCGGGAACCG  | CGCGTCGAAC  | GGGAACCTCC | TCCGCGGCGT |
| 5051 | CGAGGGGCGAG | TGCAGACTTT  | TGAGGGGCGTA | GAGCTTGGGC | GCGAGAAATA |
|      | GCTCCCCGTC  | ACGTCTGAAA  | ACTCCCGCAT  | CTCGAACCCG | CGCTCTTTAT |
| 5101 | CCGATTCCGG  | GGAGTAGGCA  | TCCGCGCCGC  | AGGCCCCGCA | GACGGTCTCG |
|      | GGCTAAGGCC  | CCTCATCCGT  | AGGCGCGGCG  | TCCGGGGCGT | CTGCCAGAGC |
| 5151 | CATTCCACGA  | GCCAGGTGAG  | CTCTGGCCGT  | TCGGGGTCAA | AAACCAGGTT |
|      | GTAAGGTGCT  | CGGTCCACTC  | GAGACCGGCA  | AGCCCCAGTT | TTTGGTCCAA |
| 5201 | TCCCCCATGC  | TTTTTGATGC  | GTTTCTTACC  | TCTGGTTTCC | ATGAGCCGGT |
|      | AGGGGGTACG  | AAAAACTACG  | CAAAGAATGG  | AGACCAAAGG | TACTCGGCCA |
| 5251 | GTCCACGCTC  | GGTGACGAAA  | AGGCTGTCCG  | TGTCCCCGTA | TACAGACTTG |
|      | CAGGTGCGAG  | CCACTGCTTT  | TCCGACAGGC  | ACAGGGGCAT | ATGTCTGAAC |
| 5301 | AGAGGCCTGT  | CCTCGAGCGG  | TGTTCCGCGG  | TCCTCCTCGT | ATAGAAACTC |
|      | TCTCCGGACA  | GGAGCTCGCC  | ACAAGGCGCC  | AGGAGGAGCA | TATCTTTGAG |
| 5351 | GGACCACTCT  | GAGACAAAGG  | CTCGCGTCCA  | GGCCAGCACG | AAGGAGGCTA |
|      | CCTGGTGAGA  | CTCTGTTTCC  | GAGCGCAGGT  | CCGGTCGTGC | TTCTTCCGAT |
| 5401 | AGTGGGAGGG  | GTAGCGGTCTG | TTGTCCACTA  | GGGGGTCCAC | TCGCTCCAGG |
|      | TCACCCTCCC  | CATCGCCAGC  | AACAGGTGAT  | CCCCCAGGTG | AGCGAGGTCC |
| 5451 | GTGTGAAGAC  | ACATGTCGCC  | CTCTTCGGCA  | TCAAGGAAGG | TGATTGGTTT |
|      | CACACTTCTG  | TGTACAGCGG  | GAGAAGCCGT  | AGTTCCTTCC | ACTAACCAAA |
| 5501 | GTAGGTGTAG  | GCCACGTGAC  | CGGGTGTTCC  | TGAAGGGGGG | CTATAAAAGG |
|      | CATCCACATC  | CGGTGCACTG  | GCCCACAAGG  | ACTTCCCCCC | GATATTTTCC |
| 5551 | GGGTGGGGGC  | GCGTTCGTCC  | TCACTCTCTT  | CCGCATCGCT | GTCTGCGAGG |
|      | CCCACCCCCG  | CGCAAGCAGG  | AGTGAGAGAA  | GGCGTAGCGA | CAGACGCTCC |

FIG. 16A-7

|      |            |            |            |             |            |
|------|------------|------------|------------|-------------|------------|
| 5601 | GCCAGCTGTT | GGGGTGAGTA | CTCCCTCTGA | AAAGCGGGCA  | TGACTTCTGC |
|      | CGGTCGACAA | CCCCACTCAT | GAGGGAGACT | TTTCGCCCCGT | ACTGAAGACG |
| 5651 | GCTAAGATTG | TCAGTTTCCA | AAAACGAGGA | GGATTTGATA  | TTCACCTGGC |
|      | CGATTCTAAC | AGTCAAAGGT | TTTTGCTCCT | CCTAAACTAT  | AAGTGGACCG |
| 5701 | CCGCGGTGAT | GCCTTTGAGG | GTGGCCGCAT | CCATCTGGTC  | AGAAAAGACA |
|      | GGCGCCACTA | CGGAAACTCC | CACCGGCGTA | GGTAGACCAG  | TCTTTTCTGT |
| 5751 | ATCTTTTTGT | TGTCAAGCTT | GGTGGCAAAC | GACCCGTAGA  | GGGCGTTGGA |
|      | TAGAAAACA  | ACAGTTCGAA | CCACCGTTTG | CTGGGCATCT  | CCCGCAACCT |
| 5801 | CAGCAACTTG | GCGATGGAGC | GCAGGGTTTG | GTTTTTGTCG  | CGATCGGCGC |
|      | GTCGTTGAAC | CGCTACCTCG | CGTCCCAAAC | CAAAAACAGC  | GCTAGCCGCG |
| 5851 | GCTCCTTGGC | CGCGATGTTT | AGCTGCACGT | ATTCGCGCGC  | AACGCACCGC |
|      | CGAGGAACCG | GCGCTACAAA | TCGACGTGCA | TAAGCGCGCG  | TTGCGTGGCG |
| 5901 | CATTCGGGAA | AGACGGTGGT | GCGCTCGTCG | GGCACCAGGT  | GCACGCGCCA |
|      | GTAAGCCCTT | TCTGCCACCA | CGCGAGCAGC | CCGTGGTCCA  | CGTGCGCGGT |
| 5951 | ACCGCGGTTG | TGCAGGGTGA | CAAGGTCAAC | GCTGGTGGCT  | ACCTCTCCGC |
|      | TGGCGCCAAC | ACGTCCCAC  | GTTCCAGTTG | CGACCACCGA  | TGGAGAGGCG |
| 6001 | GTAGGCGCTC | GTTGGTCCAG | CAGAGGCGGC | CGCCCTTGCG  | CGAGCAGAAT |
|      | CATCCGCGAG | CAACCAGGTC | GTCTCCGCCG | GCGGGAACGC  | GCTCGTCTTA |
| 6051 | GGCGGTAGGG | GGTCTAGCTG | CGTCTCGTCC | GGGGGGTCTG  | CGTCCACGGT |
|      | CCGCCATCCC | CCAGATCGAC | GCAGAGCAGG | CCCCCAGAC   | GCAGGTGCCA |
| 6101 | AAAGACCCCG | GGCAGCAGGC | GCGCGTCGAA | GTAGTCTATC  | TTGCATCCTT |
|      | TTTCTGGGGC | CCGTCTGTCG | CGCGCAGCTT | CATCAGATAG  | AACGTAGGAA |
| 6151 | GCAAGTCTAG | CGCCTGCTGC | CATGCGCGGG | CGGCAAGCGC  | GCGCTCGTAT |
|      | CGTTCAGATC | GCGGACGACG | GTACGCGCCC | GCCGTTCGCG  | CGCGAGCATA |
| 6201 | GGGTTGAGTG | GGGGACCCCA | TGGCATGGGG | TGGGTGAGCG  | CGGAGGCGTA |
|      | CCCAACTCAC | CCCCTGGGGT | ACCGTACCCC | ACCCACTCGC  | GCCTCCGCAT |
| 6251 | CATGCCGCAA | ATGTCGTAAA | CGTAGAGGGG | CTCTCTGAGT  | ATTCCAAGAT |
|      | GTACGGCGTT | TACAGCATTT | GCATCTCCCC | GAGAGACTCA  | TAAGGTTCTA |
| 6301 | ATGTAGGGTA | GCATCTTCCA | CCGCGGATGC | TGGCGCGCAC  | GTAATCGTAT |
|      | TACATCCCAT | CGTAGAAGGT | GGCGCCTACG | ACCGCGCGTG  | CATTAGCATA |
| 6351 | AGTTCGTGCG | AGGGAGCGAG | GAGGTCGGGA | CCGAGGTTGC  | TACGGGCGGG |
|      | TCAAGCACGC | TCCCTCGCTC | CTCCAGCCCT | GGCTCCAACG  | ATGCCCGCCC |

FIG. 16A-8

|      |            |            |             |            |            |
|------|------------|------------|-------------|------------|------------|
| 6401 | CTGCTCTGCT | CGGAAGACTA | TCTGCCTGAA  | GATGGCATGT | GAGTTGGATG |
|      | GACGAGACGA | GCCTTCTGAT | AGACGGACTT  | CTACCGTACA | CTCAACCTAC |
| 6451 | ATATGGTTGG | ACGCTGGAAG | ACGTTGAAGC  | TGGCGTCTGT | GAGACCTACC |
|      | TATACCAACC | TGCGACCTTC | TGCAACTTCG  | ACCGCAGACA | CTCTGGATGG |
| 6501 | GCGTCACGCA | CGAAGGAGGC | GTAGGAGTCG  | CGCAGCTTGT | TGACCAGCTC |
|      | CGCAGTGCGT | GCTTCCTCCG | CATCCTCAGC  | GCGTCGAACA | ACTGGTCGAG |
| 6551 | GGCGGTGACC | TGCACGTCTA | GGGCGCAGTA  | GTCCAGGGTT | TCCTTGATGA |
|      | CCGCCACTGG | ACGTGCAGAT | CCCGCGTCAT  | CAGGTCCCAA | AGGAACTACT |
| 6601 | TGTCATACTT | ATCCTGTCCC | TTTTTTTTTCC | ACAGCTCGCG | GTTGAGGACA |
|      | ACAGTATGAA | TAGGACAGGG | AAAAAAAAGG  | TGTCGAGCGC | CAACTCCTGT |
| 6651 | AACTCTTCGC | GGTCTTTCCA | GTA CTCTTGG | ATCGGAAACC | CGTCGGCCTC |
|      | TTGAGAAGCG | CCAGAAAGGT | CATGAGAACC  | TAGCCTTTGG | GCAGCCGGAG |
| 6701 | CGAACGGTAA | GAGCCTAGCA | TGTAGAACTG  | GTTGACGGCC | TGGTAGGCGC |
|      | GCTTGCCATT | CTCGGATCGT | ACATCTTGAC  | CAACTGCCGG | ACCATCCGCG |
| 6751 | AGCATCCCTT | TTCTACGGGT | AGCGCGTATG  | CCTGCGCGGC | CTTCCGGAGC |
|      | TCGTAGGGAA | AAGATGCCCA | TCGCGCATAC  | GGACGCGCCG | GAAGGCCTCG |
| 6801 | GAGGTGTGGG | TGAGCGCAAA | GGTGTCCCTG  | ACCATGACTT | TGAGGTACTG |
|      | CTCCACACCC | ACTCGCGTTT | CCACAGGGAC  | TGGTACTGAA | ACTCCATGAC |
| 6851 | GTATTTGAAG | TCAGTGTCGT | CGCATCCGCC  | CTGCTCCCAG | AGCAAAAAGT |
|      | CATAAACTTC | AGTCACAGCA | GCGTAGGCGG  | GACGAGGGTC | TCGTTTTTCA |
| 6901 | CCGTGCGCTT | TTTGGAACGC | GGATTTGGCA  | GGGCGAAGGT | GACATCGTTG |
|      | GGCACGCGAA | AAACCTTGCG | CCTAAACCGT  | CCCGCTTCCA | CTGTAGCAAC |
| 6951 | AAGAGTATCT | TTCCCGCGCG | AGGCATAAAG  | TTGCGTGTGA | TGCGGAAGGG |
|      | TTCTCATAGA | AAGGGCGCGC | TCCGTATTTT  | AACGCACACT | ACGCCTTCCC |
| 7001 | TCCCGGCACC | TCGGAACGGT | TGTTAATTAC  | CTGGGCGGCG | AGCACGATCT |
|      | AGGGCCGTGG | AGCCTTGCCA | ACAATTAATG  | GACCCGCCGC | TCGTGCTAGA |
| 7051 | CGTCAAAGCC | GTTGATGTTG | TGGCCACAA   | TGTAAAGTTC | CAAGAAGCGC |
|      | GCAGTTTCGG | CAACTACAAC | ACCGGGTGTT  | ACATTTCAAG | GTTCTTCGCG |
| 7101 | GGGATGCCCT | TGATGGAAGG | CAATTTTTTA  | AGTTCCTCGT | AGGTGAGCTC |
|      | CCCTACGGGA | ACTACCTTCC | GTTAAAAAAT  | TCAAGGAGCA | TCCACTCGAG |
| 7151 | TTCAGGGGAG | CTGAGCCCGT | GCTCTGAAAG  | GGCCCAGTCT | GCAAGATGAG |
|      | AAGTCCCCTC | GACTCGGGCA | CGAGACTTTC  | CCGGGTCAGA | CGTTCTACTC |

FIG. 16A-9

|      |            |            |            |             |             |
|------|------------|------------|------------|-------------|-------------|
| 7201 | GGTTGGAAGC | GACGAATGAG | CTCCACAGGT | CACGGGCCAT  | TAGCATTTGC  |
|      | CCAACCTTCG | CTGCTTACTC | GAGGTGTCCA | GTGCCCCGGTA | ATCGTAAACG  |
| 7251 | AGGTGGTCGC | GAAAGGTCCT | AAACTGGCGA | CCTATGGCCA  | TTTTTTCTGG  |
|      | TCCACCAGCG | CTTTCCAGGA | TTTGACCGCT | GGATACCGGT  | AAAAAAGACC  |
| 7301 | GGTGATGCAG | TAGAAGGTAA | GCGGGTCTTG | TTCCCAGCGG  | TCCCATCCAA  |
|      | CCACTACGTC | ATCTTCCATT | CGCCCAGAAC | AAGGGTCGCC  | AGGGTAGGTT  |
| 7351 | GGTTCGCGGC | TAGGTCTCGC | GCGGCAGTCA | CTAGAGGCTC  | ATCTCCGCCG  |
|      | CCAAGCGCCG | ATCCAGAGCG | CGCCGTCAGT | GATCTCCGAG  | TAGAGGCGGC  |
| 7401 | AACTTCATGA | CCAGCATGAA | GGGCACGAGC | TGCTTCCCAA  | AGGCCCCCAT  |
|      | TTGAAGTACT | GGTCGTACTT | CCCGTGCTCG | ACGAAGGGTT  | TCCGGGGGTA  |
| 7451 | CCAAGTATAG | GTCTCTACAT | CGTAGGTGAC | AAAGAGACGC  | TCGGTGCGAG  |
|      | GGTTCATATC | CAGAGATGTA | GCATCCACTG | TTTCTCTGCG  | AGCCACGCTC  |
| 7501 | GATGCGAGCC | GATCGGGAAG | AACTGGATCT | CCCGCCACCA  | ATTGGAGGAG  |
|      | CTACGCTCGG | CTAGCCCTTC | TTGACCTAGA | GGGCGGTGGT  | TAACCTCCTC  |
| 7551 | TGGCTATTGA | TGTGGTGAAA | GTAGAAGTCC | CTGCGACGGG  | CCGAACACTC  |
|      | ACCGATAACT | ACACCACTTT | CATCTTCAGG | GACGCTGCCC  | GGCTTGTGAG  |
| 7601 | GTGCTGGCTT | TTGTAAAAAC | GTGCGCAGTA | CTGGCAGCGG  | TGCACGGGCT  |
|      | CACGACCGAA | AACATTTTTG | CACGCGTCAT | GACCGTCGCC  | ACGTGCCCCGA |
| 7651 | GTACATCCTG | CACGAGGTTG | ACCTGACGAC | CGCGCACAAG  | GAAGCAGAGT  |
|      | CATGTAGGAC | GTGCTCCAAC | TGGACTGCTG | GCGCGTGTTT  | CTTCGTCTCA  |
| 7701 | GGGAATTTGA | GCCCCTCGCC | TGGCGGGTTT | GGCTGGTGGT  | CTTCTACTTC  |
|      | CCCTTAAACT | CGGGGAGCGG | ACCGCCCAA  | CCGACCACCA  | GAAGATGAAG  |
| 7751 | GGCTGCTTGT | CCTTGACCGT | CTGGCTGCTC | GAGGGGAGTT  | ACGGTGGATC  |
|      | CCGACGAACA | GGAAGTGGCA | GACCGACGAG | CTCCCCTCAA  | TGCCACCTAG  |
| 7801 | GGACCACCAC | GCCGCGCGAG | CCCAAAGTCC | AGATGTCCGC  | GCGCGGCGGT  |
|      | CCTGGTGGTG | CGGCGCGCTC | GGGTTTCAGG | TCTACAGGCG  | CGCGCCGCCA  |
| 7851 | CGGAGCTTGA | TGACAACATC | GCGCAGATGG | GAGCTGTCCA  | TGGTCTGGAG  |
|      | GCCTCGAACT | ACTGTTGTAG | CGCGTCTACC | CTCGACAGGT  | ACCAGACCTC  |
| 7901 | CTCCCGCGGC | GTCAGGTCAG | GCGGGAGCTC | CTGCAGGTTT  | ACCTCGCATA  |
|      | GAGGGCGCCG | CAGTCCAGTC | CGCCCTCGAG | GACGTCCAAA  | TGGAGCGTAT  |
| 7951 | GACGGGTCAG | GGCGCGGGCT | AGATCCAGGT | GATACCTAAT  | TTCCAGGGGC  |
|      | CTGCCAGTC  | CCGCGCCCGA | TCTAGGTCCA | CTATGGATTA  | AAGGTCCCCG  |

FIG. 16A-10



|      |                          |                          |                          |                           |                           |
|------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 8001 | TGGTTGGTGG<br>ACCAACCACC | CGGCGTCGAT<br>GCCGCAGCTA | GGCTTGCAAG<br>CCGAACGTTC | AGGCCGCATC<br>TCCGGCGTAG  | CCCGCGGGCGC<br>GGGCGCCGCG |
| 8051 | GACTACGGTA<br>CTGATGCCAT | CCGCGCGGCG<br>GGCGCGCCGC | GGCGGTGGGC<br>CCGCCACCCG | CGCGGGGGTG<br>GCGCCCCCAC  | TCCTTGGATG<br>AGGAACCTAC  |
| 8101 | ATGCATCTAA<br>TACGTAGATT | AAGCGGTGAC<br>TTCGCCACTG | GCGGGCGAGC<br>CGCCCGCTCG | CCCCGGAGGT<br>GGGGCCTCCA  | AGGGGGGGCT<br>TCCCCCCCCGA |
| 8151 | CCGGACCCGC<br>GGCCTGGGCG | CGGGAGAGGG<br>GCCCTCTCCC | GGCAGGGGCA<br>CCGTCCCCGT | CGTCGGCGCC<br>GCAGCCGCGG  | GCGCGCGGGC<br>CGCGCGCCCG  |
| 8201 | AGGAGCTGGT<br>TCCTCGACCA | GCTGCGCGCG<br>CGACGCGCGC | TAGGTTGCTG<br>ATCCAACGAC | GCGAACGCGA<br>CGCTTGCGCT  | CGACGCGGCG<br>GCTGCGCCGC  |
| 8251 | GTTGATCTCC<br>CAACTAGAGG | TGAATCTGGC<br>ACTTAGACCG | GCCTCTGCGT<br>CGGAGACGCA | GAAGACGACG<br>CTTCTGCTGC  | GGCCCGGTGA<br>CCGGGCCACT  |
| 8301 | GCTTGAACCT<br>CGAACTTGGA | GAAAGAGAGT<br>CTTTCTCTCA | TCGACAGAAT<br>AGCTGTCTTA | CAATTTTCGGT<br>GTTAAAGCCA | GTCGTTGACG<br>CAGCAACTGC  |
| 8351 | GCGGCCTGGC<br>CGCCGGACCG | GCAAAATCTC<br>CGTTTTAGAG | CTGCACGTCT<br>GACGTGCAGA | CCTGAGTTGT<br>GGACTCAACA  | CTTGATAGGC<br>GAACTATCCG  |
| 8401 | GATCTCGGCC<br>CTAGAGCCGG | ATGAACTGCT<br>TACTTGACGA | CGATCTCTTC<br>GCTAGAGAAG | CTCCTGGAGA<br>GAGGACCTCT  | TCTCCGCGTC<br>AGAGGCGCAG  |
| 8451 | CGGCTCGCTC<br>GCCGAGCGAG | CACGGTGGCG<br>GTGCCACCGC | GCGAGGTCGT<br>CGCTCCAGCA | TGGAAATGCG<br>ACCTTTACGC  | GGCCATGAGC<br>CCGGTACTCG  |
| 8501 | TGCGAGAAGG<br>ACGCTCTTCC | CGTTGAGGCC<br>GCAACTCCGG | TCCCTCGTTC<br>AGGGAGCAAG | CAGACGCGGC<br>GTCTGCGCCG  | TGTAGACCAC<br>ACATCTGGTG  |
| 8551 | GCCCCCTTCG<br>CGGGGGAAGC | GCATCGCGGG<br>CGTAGCGCCC | CGCGCATGAC<br>GCGCGTACTG | CACCTGCGCG<br>GTGGACGCGC  | AGATTGAGCT<br>TCTAACTCGA  |
| 8601 | CCACGTGCCG<br>GGTGCACGGC | GGCGAAGACG<br>CCGCTTCTGC | GCGTAGTTTC<br>CGCATCAAAG | GCAGGCGCTG<br>CGTCCGCGAC  | AAAGAGGTAG<br>TTTCTCCATC  |
| 8651 | TTGAGGGTGG<br>AACTCCCACC | TGGCGGTGTG<br>ACCGCCACAC | TTCTGCCACG<br>AAGACGGTGC | AAGAAGTACA<br>TTCTTCATGT  | TAACCCAGCG<br>ATTGGGTGCG  |
| 8701 | TCGCAACGTG<br>AGCGTTGCAC | GATTCGTTGA<br>CTAAGCAACT | TATCCCCCAA<br>ATAGGGGGTT | GGCCTCAAGG<br>CCGGAGTTCC  | CGCTCCATGG<br>GCGAGGTACC  |
| 8751 | CCTCGTAGAA<br>GGAGCATCTT | GTCCACGGCG<br>CAGGTGCCGC | AAGTTGAAAA<br>TTCAACTTTT | ACTGGGAGTT<br>TGACCCTCAA  | GCGCGCCGAC<br>CGCGCGGCTG  |

FIG. 16A-11

|      |            |            |             |            |            |
|------|------------|------------|-------------|------------|------------|
| 8801 | ACGGTTAACT | CCTCCTCCAG | AAGACGGATG  | AGCTCGGCGA | CAGTGTCGCG |
|      | TGCCAATTGA | GGAGGAGGTC | TTCTGCCTAC  | TCGAGCCGCT | GTCACAGCGC |
| 8851 | CACCTCGCGC | TCAAAGGCTA | CAGGGGCCTC  | TTCTTCTTCT | TCAATCTCCT |
|      | GTGGAGCGCG | AGTTTCCGAT | GTCCCCGGAG  | AAGAAGAAGA | AGTTAGAGGA |
| 8901 | CTTCCATAAG | GGCCTCCCCT | TCTTCTTCTT  | CTGGCGGCGG | TGGGGGAGGG |
|      | GAAGGTATTC | CCGGAGGGGA | AGAAGAAGAA  | GACCGCCGCC | ACCCCCTCCC |
| 8951 | GGGACACGGC | GGCGACGACG | GCGCACCGGG  | AGGCGGTCGA | CAAAGCGCTC |
|      | CCCTGTGCCG | CCGCTGCTGC | CGCGTGGCCC  | TCCGCCAGCT | GTTTCGCGAG |
| 9001 | GATCATCTCC | CCGCGGCGAC | GGCGCATGGT  | CTCGGTGACG | GCGCGGCCGT |
|      | CTAGTAGAGG | GGCGCCGCTG | CCGCGTACCA  | GAGCCACTGC | CGCGCCGGCA |
| 9051 | TCTCGCGGGG | GCGCAGTTGG | AAGACGCCGC  | CCGTCATGTC | CCGGTTATGG |
|      | AGAGCGCCCC | CGCGTCAACC | TTCTGCGGCG  | GGCAGTACAG | GGCCAATACC |
| 9101 | GTTGGCGGGG | GGCTGCCATG | CGGCAGGGAT  | ACGGCGCTAA | CGATGCATCT |
|      | CAACCGCCCC | CCGACGGTAC | GCCGTCCCTA  | TGCCGCGATT | GCTACGTAGA |
| 9151 | CAACAATTGT | TGTGTAGGTA | CTCCGCCGCC  | GAGGGACCTG | AGCGAGTCCG |
|      | GTTGTTAACA | ACACATCCAT | GAGGCGGCGG  | CTCCCTGGAC | TCGCTCAGGC |
| 9201 | CATCGACCGG | ATCGGAAAAC | CTCTCGAGAA  | AGGCGTCTAA | CCAGTCACAG |
|      | GTAGCTGGCC | TAGCCTTTTG | GAGAGCTCTT  | TCCGCAGATT | GGTCAGTGTC |
| 9251 | TCGCAAGGTA | GGCTGAGCAC | CGTGGCGGGC  | GGCAGCGGGC | GGCGGTCGGG |
|      | AGCGTTCCAT | CCGACTCGTG | GCACCGCCCC  | CCGTCGCCCC | CCGCCAGCCC |
| 9301 | GTTGTTTCTG | GCGGAGGTGC | TGCTGATGAT  | GTAATTAAAG | TAGGCGGTCT |
|      | CAACAAAGAC | CGCCTCCACG | ACGACTACTA  | CATTAATTTC | ATCCGCCAGA |
| 9351 | TGAGACGGCG | GATGGTCGAC | AGAAGCACCA  | TGTCCTTGGG | TCCGGCCTGC |
|      | ACTCTGCCGC | CTACCAGCTG | TCTTCGTGGT  | ACAGGAACCC | AGGCCGGACG |
| 9401 | TGAATGCGCA | GGCGGTCGGC | CATGCCCCAG  | GCTTCGTTTT | GACATCGGCG |
|      | ACTTACGCGT | CCGCCAGCCG | GTACGGGGTC  | CGAAGCAAAA | CTGTAGCCGC |
| 9451 | CAGGTCTTTG | TAGTAGTCTT | GCATGAGCCT  | TTCTACCGGC | ACTTCTTCTT |
|      | GTCCAGAAAC | ATCATCAGAA | CGTACTCGGA  | AAGATGGCCG | TGAAGAAGAA |
| 9501 | CTCCTTCCTC | TTGTCCTGCA | TCTCTTG CAT | CTATCGCTGC | GGCGGCGGCG |
|      | GAGGAAGGAG | AACAGGACGT | AGAGAACGTA  | GATAGCGACG | CCGCCGCCGC |
| 9551 | GAGTTTGGCC | GTAGGTGGCG | CCCTCTTCCT  | CCCATGCGTG | TGACCCCGAA |
|      | CTCAAACCGG | CATCCACCGC | GGGAGAAGGA  | GGGTACGCAC | ACTGGGGCTT |

FIG. 16A-12

|       |                          |                          |                            |                          |                           |
|-------|--------------------------|--------------------------|----------------------------|--------------------------|---------------------------|
| 9601  | GCCCCTCATC<br>CGGGGAGTAG | GGCTGAAGCA<br>CCGACTTCGT | GGGCTAGGTC<br>CCCGATCCAG   | GGCGACAACG<br>CCGCTGTTGC | CGCTCGGCTA<br>GCGAGCCGAT  |
| 9651  | ATATGGCCTG<br>TATACCGGAC | CTGCACCTGC<br>GACGTGGACG | GTGAGGGTAG<br>CACTCCCATC   | ACTGGAAGTC<br>TGACCTTCAG | ATCCATGTCC<br>TAGGTACAGG  |
| 9701  | ACAAAGCGGT<br>TGTTTCGCCA | GGTATGCGCC<br>CCATACGCGG | CGTGTTGATG<br>GCACAACACTAC | GTGTAAGTGC<br>CACATTCACG | AGTTGGCCAT<br>TCAACCGGTA  |
| 9751  | AACGGACCAG<br>TTGCCTGGTC | TTAACGGTCT<br>AATTGCCAGA | GGTGACCCGG<br>CCACTGGGCC   | CTGCGAGAGC<br>GACGCTCTCG | TCGGTGTACC<br>AGCCACATGG  |
| 9801  | TGAGACGCGA<br>ACTCTGCGCT | GTAAGCCCTC<br>CATTCGGGAG | GAGTCAAATA<br>CTCAGTTTAT   | CGTAGTCGTT<br>GCATCAGCAA | GCAAGTCCGC<br>CGTTCAGGCG  |
| 9851  | ACCAGGTACT<br>TGGTCCATGA | GGTATCCCAC<br>CCATAGGGTG | CAAAAAGTGC<br>GTTTTTTCACG  | GGCGGCGGCT<br>CCGCCGCCGA | GGCGGTAGAG<br>CCGCCATCTC  |
| 9901  | GGGCCAGCGT<br>CCCGGTCGCA | AGGGTGGCCG<br>TCCCACCGGC | GGGCTCCGGG<br>CCCGAGGCCC   | GGCGAGATCT<br>CCGCTCTAGA | TCCAACATAA<br>AGGTTGTATT  |
| 9951  | GGCGATGATA<br>CCGCTACTAT | TCCGTAGATG<br>AGGCATCTAC | TACCTGGACA<br>ATGGACCTGT   | TCCAGGTGAT<br>AGGTCCACTA | GCCGGCGGGC<br>CGGCCGCCGC  |
| 10001 | GTGGTGGAGG<br>CACCACCTCC | CGCGCGGAAA<br>GCGCGCCTTT | GTCGCGGACG<br>CAGCGCCTGC   | CGGTTCCAGA<br>GCCAAGGTCT | TGTTGCGCAG<br>ACAACGCGTC  |
| 10051 | CGGCAAAAAG<br>GCCGTTTTTC | TGCTCCATGG<br>ACGAGGTACC | TCGGGACGCT<br>AGCCCTGCGA   | CTGGCCGGTC<br>GACCGGCCAG | AGGCGCGCGC<br>TCCGCGCGCG  |
| 10101 | AATCGTTGAC<br>TTAGCAACTG | GCTCTAGACC<br>CGAGATCTGG | GTGCAAAAGG<br>CACGTTTTCC   | AGAGCCTGTA<br>TCTCGGACAT | AGCGGGCACT<br>TCGCCCCGTGA |
| 10151 | CTTCCGTGGT<br>GAAGGCACCA | CTGGTGGATA<br>GACCACCTAT | AATTCGCAAG<br>TTAAGCGTTC   | GGTATCATGG<br>CCATAGTACC | CGGACGACCG<br>GCCTGCTGGC  |
| 10201 | GGGTTCGAGC<br>CCCAAGCTCG | CCCGTATCCG<br>GGGCATAGGC | GCCGTCCGCC<br>CGGCAGGCGG   | GTGATCCATG<br>CACTAGGTAC | CGGTTACCGC<br>GCCAATGGCG  |
| 10251 | CCGCGTGTCG<br>GGCGCACAGC | AACCCAGGTG<br>TTGGGTCCAC | TGCGACGTCA<br>ACGCTGCAGT   | GACAACGGGG<br>CTGTTGCCCC | GAGTGCTCCT<br>CTCACGAGGA  |
| 10301 | TTTGGCTTCC<br>AAACCGAAGG | TTCCAGGCGC<br>AAGGTCCGCG | GGCGGCTGCT<br>CCGCCGACGA   | GCGCTAGCTT<br>CGCGATCGAA | TTTTGGCCAC<br>AAAACCGGTG  |
| 10351 | TGGCCGCGCG<br>ACCGGCGCGC | CAGCGTAAGC<br>GTCGCATTCG | GGTTAGGCTG<br>CCAATCCGAC   | GAAAGCGAAA<br>CTTTCGCTTT | GCATTAAGTG<br>CGTAATTCAC  |

FIG. 16A-13

|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10401 | GCTCGCTCCC<br>CGAGCGAGGG | TGTAGCCGGA<br>ACATCGGCCT | GGGTTATTTT<br>CCCAATAAAA | CCAAGGGTTG<br>GGTTCCCAAC | AGTCGCGGGA<br>TCAGCGCCCT |
| 10451 | CCCCCGGTTT<br>GGGGGCCAAG | GAGTCTCGGA<br>CTCAGAGCCT | CCGGCCGGAC<br>GGCCGGCCTG | TGCGGCGAAC<br>ACGCCGCTTG | GGGGGTTTGC<br>CCCCCAAACG |
| 10501 | CTCCCCGTCA<br>GAGGGGCAGT | TGCAAGACCC<br>ACGTTCTGGG | CGCTTGCAAA<br>GCGAACGTTT | TTCTCCGGA<br>AAGGAGGCCT  | AACAGGGACG<br>TTGTCCCTGC |
| 10551 | AGCCCCTTTT<br>TCGGGGAAAA | TTGCTTTTCC<br>AACGAAAAGG | CAGATGCATC<br>GTCTACGTAG | CGGTGCTGCG<br>GCCACGACGC | GCAGATGCGC<br>CGTCTACGCG |
| 10601 | CCCCCTCCTC<br>GGGGGAGGAG | AGCAGCGGCA<br>TCGTGCGCCG | AGAGCAAGAG<br>TCTCGTTCTC | CAGCGGCAGA<br>GTCGCCGTCT | CATGCAGGGC<br>GTACGTCCCG |
| 10651 | ACCCTCCCCT<br>TGGGAGGGGA | CCTCCTACCG<br>GGAGGATGGC | CGTCAGGAGG<br>GCAGTCCTCC | GGCGACATCC<br>CCGCTGTAGG | GCGGTTGACG<br>CGCCAACTGC |
| 10701 | CGGCAGCAGA<br>GCCGTCGTCT | TGGTGATTAC<br>ACCACTAATG | GAACCCCCGC<br>CTTGGGGGCG | GGCGCCGGGC<br>CCGCGGCCCG | CCGGCACTAC<br>GGCCGTGATG |
| 10751 | CTGGACTTGG<br>GACCTGAACC | AGGAGGGCGA<br>TCCTCCCGCT | GGGCCTGGCG<br>CCCGGACCGC | CGGCTAGGAG<br>GCCGATCCTC | CGCCCTCTCC<br>GCGGGAGAGG |
| 10801 | TGAGCGGCAC<br>ACTCGCCGTG | CCAAGGGTGC<br>GGTTCCACG  | AGCTGAAGCG<br>TCGACTTCGC | TGATACGCGT<br>ACTATGCGCA | GAGGCGTACG<br>CTCCGCATGC |
| 10851 | TGCCGCGGCA<br>ACGGCGCCGT | GAACCTGTTT<br>CTTGGACAAA | CGCGACCGCG<br>GCGCTGGCGC | AGGGAGAGGA<br>TCCCTCTCCT | GCCCGAGGAG<br>CGGGCTCCTC |
| 10901 | ATGCGGGATC<br>TACGCCCTAG | GAAAGTTCCA<br>CTTTCAAGGT | CGCAGGGCGC<br>GCGTCCCGCG | GAGCTGCGGC<br>CTCGACGCCG | ATGGCCTGAA<br>TACCGGACTT |
| 10951 | TCGCGAGCGG<br>AGCGCTCGCC | TTGCTGCGCG<br>AACGACGCGC | AGGAGGACTT<br>TCCTCCTGAA | TGAGCCCGAC<br>ACTCGGGCTG | GCGCGAACCG<br>CGCGCTTGGC |
| 11001 | GGATTAGTCC<br>CCTAATCAGG | CGCGCGCGCA<br>GCGCGCGCGT | CACGTGGCGG<br>GTGCACCGCC | CCGCCGACCT<br>GGCGGCTGGA | GGTAACCGCA<br>CCATTGGCGT |
| 11051 | TACGAGCAGA<br>ATGCTCGTCT | CGGTGAACCA<br>GCCACTTGGT | GGAGATTAAC<br>CCTCTAATTG | TTTCAAAAAA<br>AAAGTTTTTT | GCTTTAACAA<br>CGAAATTGTT |
| 11101 | CCACGTGCGT<br>GGTGACGCA  | ACGCTTGTGG<br>TGCGAACACC | CGCGCGAGGA<br>GCGCGCTCCT | GGTGGCTATA<br>CCACCGATAT | GGACTGATGC<br>CCTGACTACG |
| 11151 | ATCTGTGGGA<br>TAGACACCCT | CTTTGTAAGC<br>GAAACATTCG | GCGCTGGAGC<br>CGCGACCTCG | AAAACCCAAA<br>TTTTGGGTTT | TAGCAAGCCG<br>ATCGTTCGGC |

FIG. 16A-14

|       |                           |                           |                          |                          |                          |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 11201 | CTCATGGCGC<br>GAGTACCGCG  | AGCTG TTCCT<br>TCGACAAGGA | TATAGTGCAG<br>ATATCACGTC | CACAGCAGGG<br>GTGTCGTCCC | ACAACGAGGC<br>TGTTGCTCCG |
| 11251 | ATTCAGGGAT<br>TAAGTCCCTA  | GCGCTGCTAA<br>CGCGACGATT  | ACATAGTAGA<br>TGTATCATCT | GCCCGAGGGC<br>CGGGCTCCCG | CGCTGGCTGC<br>GCGACCGACG |
| 11301 | TCGATTTGAT<br>AGCTAAACTA  | AAACATCCTG<br>TTTGTAGGAC  | CAGAGCATAG<br>GTCTCGTATC | TGGTGCAGGA<br>ACCACGTCCT | GCGCAGCTTG<br>CGCGTCGAAC |
| 11351 | AGCCTGGCTG<br>TCGGACCGAC  | ACAAGGTGGC<br>TGTTCCACCG  | CGCCATCAAC<br>GCGGTAGTTG | TATTCCATGC<br>ATAAGGTACG | TTAGCCTGGG<br>AATCGGACCC |
| 11401 | CAAGTTTTAC<br>GTTCAAAATG  | GCCCGCAAGA<br>CGGGCGTTCT  | TATACCATAC<br>ATATGGTATG | CCCTTACGTT<br>GGGAATGCAA | CCCATAGACA<br>GGGTATCTGT |
| 11451 | AGGAGGTAAA<br>TCCTCCATTT  | GATCGAGGGG<br>CTAGCTCCCC  | TTCTACATGC<br>AAGATGTACG | GCATGGCGCT<br>CGTACCGCGA | GAAGGTGCTT<br>CTTCCACGAA |
| 11501 | ACCTTGAGCG<br>TGGAAC TCGC | ACGACCTGGG<br>TGCTGGACCC  | CGTTTATCGC<br>GCAAATAGCG | AACGAGCGCA<br>TTGCTCGCGT | TCCACAAGGC<br>AGGTGTTCCG |
| 11551 | CGTGAGCGTG<br>GCACTCGCAC  | AGCCGGCGGC<br>TCGGCCGCCG  | GCGAGCTCAG<br>CGCTCGAGTC | CGACCGCGAG<br>GCTGGCGCTC | CTGATGCACA<br>GACTACGTGT |
| 11601 | GCCTGCAAAG<br>CGGACGTTTC  | GGCCCTGGCT<br>CCGGGACCGA  | GGCACGGGCA<br>CCGTGCCCGT | GCGGCGATAG<br>CGCCGCTATC | AGAGGCCGAG<br>TCTCCGGCTC |
| 11651 | TCCTACTTTG<br>AGGATGAAAC  | ACGCGGGCGC<br>TGCGCCCGCG  | TGACCTGCGC<br>ACTGGACGCG | TGGGCCCCAA<br>ACCCGGGGTT | GCCGACGCGC<br>CGGCTGCGCG |
| 11701 | CCTGGAGGCA<br>GGACCTCCGT  | GCTGGGGCCG<br>CGACCCCGGC  | GACCTGGGCT<br>CTGGACCCGA | GGCGGTGGCA<br>CCGCCACCGT | CCCGCGCGCG<br>GGGCGCGCGC |
| 11751 | CTGGCAACGT<br>GACCGTTGCA  | CGGCGGCGTG<br>GCCGCCGCAC  | GAGGAATATG<br>CTCCTTATAC | ACGAGGACGA<br>TGCTCCTGCT | TGAGTACGAG<br>ACTCATGCTC |
| 11801 | CCAGAGGACG<br>GGTCTCCTGC  | GCGAGTACTA<br>CGCTCATGAT  | AGCGGTGATG<br>TCGCCACTAC | TTTCTGATCA<br>AAAGACTAGT | GATGATGCAA<br>CTACTACGTT |
| 11851 | GACGCAACGG<br>CTGCGTTGCC  | ACCCGGCGGT<br>TGGGCCGCCA  | GCGGGCGGCG<br>CGCCCGCCGC | CTGCAGAGCC<br>GACGTCTCGG | AGCCGTCCGG<br>TCGGCAGGCC |
| 11901 | CCTTAACTCC<br>GGAATTGAGG  | ACGGACGACT<br>TGCCTGCTGA  | GGCGCCAGGT<br>CCGCGGTCCA | CATGGACCGC<br>GTACCTGGCG | ATCATGTCGC<br>TAGTACAGCG |
| 11951 | TGACTGCGCG<br>ACTGACGCGC  | CAATCCTGAC<br>GTTAGGACTG  | GCGTTCCGGC<br>CGCAAGGCCG | AGCAGCCGCA<br>TCGTGCGCGT | GGCCAACCGG<br>CCGGTTGGCC |

FIG. 16A-15



|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 12001 | CTCTCCGCAA | TTCTGGAAGC | GGTGGTCCCG | GCGCGCGCAA | ACCCACGCA  |
|       | GAGAGGCGTT | AAGACCTTCG | CCACCAGGGC | CGCGCGCGTT | TGGGGTGCGT |
| 12051 | CGAGAAGGTG | CTGGCGATCG | TAAACGCGCT | GGCCGAAAC  | AGGGCCATCC |
|       | GCTCTTCCAC | GACCGCTAGC | ATTTGCGCGA | CCGGCTTTTG | TCCCGGTAGG |
| 12101 | GGCCCGACGA | GGCCGGCCTG | GTCTACGACG | CGCTGCTTCA | GCGCGTGGCT |
|       | CCGGGCTGCT | CCGGCCGGAC | CAGATGCTGC | GCGACGAAGT | CGCGCACCGA |
| 12151 | CGTTACAACA | GCGGCAACGT | GCAGACCAAC | CTGGACCGGC | TGGTGGGGGA |
|       | GCAATGTTGT | CGCCGTTGCA | CGTCTGGTTG | GACCTGGCCG | ACCACCCCT  |
| 12201 | TGTGCGCGAG | GCCGTGGCGC | AGCGTGAGCG | CGCGCAGCAG | CAGGGCAACC |
|       | ACACGCGCTC | CGGCACCGCG | TCGCACTCGC | GCGCGTCGTC | GTCCCGTTGG |
| 12251 | TGGGCTCCAT | GGTTGCACTA | AACGCCTTCC | TGAGTACACA | GCCCGCCAAC |
|       | ACCCGAGGTA | CCAACGTGAT | TTGCGGAAGG | ACTCATGTGT | CGGGCGGTTG |
| 12301 | GTGCCGCGGG | GACAGGAGGA | CTACACCAAC | TTTGTGAGCG | CACTGCGGCT |
|       | CACGGCGCCC | CTGTCCTCCT | GATGTGGTTG | AAACACTCGC | GTGACGCCGA |
| 12351 | AATGGTGACT | GAGACACCGC | AAAGTGAGGT | GTACCAGTCT | GGGCCAGACT |
|       | TTACCACTGA | CTCTGTGGCG | TTTCACTCCA | CATGGTCAGA | CCCGGTCTGA |
| 12401 | ATTTTTTCCA | GACCAGTAGA | CAAGGCCTGC | AGACCGTAAA | CCTGAGCCAG |
|       | TAAAAAAGGT | CTGGTCATCT | GTTCCGGACG | TCTGGCATT  | GGACTCGGTC |
| 12451 | GCTTTCAAAA | ACTTGCAGGG | GCTGTGGGGG | GTGCGGGCTC | CCACAGGCGA |
|       | CGAAAGTTTT | TGAACGTCCC | CGACACCCCC | CACGCCCGAG | GGTGTCCGCT |
| 12501 | CCGCGCGACC | GTGTCTAGCT | TGCTGACGCC | CAACTCGCGC | CTGTTGCTGC |
|       | GGCGCGCTGG | CACAGATCGA | ACGACTGCGG | GTTGAGCGCG | GACAACGACG |
| 12551 | TGCTAATAGC | GCCCTTCACG | GACAGTGGCA | GCGTGTCCCG | GGACACATAC |
|       | ACGATTATCG | CGGGAAGTGC | CTGTCACCGT | CGCACAGGGC | CCTGTGTATG |
| 12601 | CTAGGTCACT | TGCTGACACT | GTACCGCGAG | GCCATAGGTC | AGGCGCATGT |
|       | GATCCAGTGA | ACGACTGTGA | CATGGCGCTC | CGGTATCCAG | TCCGCGTACA |
| 12651 | GGACGAGCAT | ACTTTCCAGG | AGATTACAAG | TGTCAGCCGC | GCGCTGGGGC |
|       | CCTGCTCGTA | TGAAAGGTCC | TCTAATGTTT | ACAGTCGGCG | CGCGACCCCG |
| 12701 | AGGAGGACAC | GGGCAGCCTG | GAGGCAACCC | TAAACTACCT | GCTGACCAAC |
|       | TCCTCCTGTG | CCCGTCGGAC | CTCCGTTGGG | ATTTGATGGA | CGACTGGTTG |
| 12751 | CGGCGGCAGA | AGATCCCCTC | GTTGCACAGT | TTAAACAGCG | AGGAGGAGCG |
|       | GCCGCCGTCT | TCTAGGGGAG | CAACGTGTCA | AATTTGTCGC | TCCTCCTCGC |

FIG. 16A-16

|       |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|
| 12801 | CATTTTGCGC | TACGTGCAGC | AGAGCGTGAG | CCTTAACCTG | ATGCGCGACG |
|       | GTAAAACGCG | ATGCACGTCG | TCTCGCACTC | GGAATTGGAC | TACGCGCTGC |
| 12851 | GGGTAACGCC | CAGCGTGGCG | CTGGACATGA | CCGCGCGCAA | CATGGAACCG |
|       | CCCATTGCGG | GTCGCACCGC | GACCTGTACT | GGCGCGCGTT | GTACCTTGGC |
| 12901 | GGCATGTATG | CCTCAAACCG | GCCGTTTATC | AACCGCCTAA | TGGACTACTT |
|       | CCGTACATAC | GGAGTTTGGC | CGGCAAATAG | TTGGCGGATT | ACCTGATGAA |
| 12951 | GCATCGCGCG | GCCGCCGTGA | ACCCCGAGTA | TTTCACCAAT | GCCATCTTGA |
|       | CGTAGCGCGC | CGGCGGCACT | TGGGGCTCAT | AAAGTGGTTA | CGGTAGAACT |
| 13001 | ACCCGCACTG | GCTACCGCCC | CCTGGTTTCT | ACACCGGGGG | ATTCGAGGTG |
|       | TGGGCGTGAC | CGATGGCGGG | GGACCAAAGA | TGTGGCCCCC | TAAGCTCCAC |
| 13051 | CCCGAGGGTA | ACGATGGATT | CCTCTGGGAC | GACATAGACG | ACAGCGTGTT |
|       | GGGCTCCCAT | TGCTACCTAA | GGAGACCCTG | CTGTATCTGC | TGTCGCACAA |
| 13101 | TTCCCCGCAA | CCGCAGACCC | TGCTAGAGTT | GCAACAGCGC | GAGCAGGCAG |
|       | AAGGGGCGTT | GGCGTCTGGG | ACGATCTCAA | CGTTGTCGCG | CTCGTCCGTC |
| 13151 | AGGCGGCGCT | GCGAAAGGAA | AGCTTCCGCA | GGCCAAGCAG | CTTGTCCGAT |
|       | TCCGCCGCGA | CGCTTTCCTT | TCGAAGGCGT | CCGGTTCGTC | GAACAGGCTA |
| 13201 | CTAGGCGCTG | CGGCCCCGCG | GTCAGATGCT | AGTAGCCCAT | TTCCAAGCTT |
|       | GATCCGCGAC | GCCGGGGCGC | CAGTCTACGA | TCATCGGGTA | AAGGTTCGAA |
| 13251 | GATAGGGTCT | CTTACCAGCA | CTCGCACCAC | CCGCCCCGCG | CTGCTGGGCG |
|       | CTATCCCAGA | GAATGGTCGT | GAGCGTGGTG | GGCGGGCGCG | GACGACCCGC |
| 13301 | AGGAGGAGTA | CCTAAACAAC | TCGCTGCTGC | AGCCGCAGCG | CGAAAAAAAC |
|       | TCCTCCTCAT | GGATTTGTTG | AGCGACGACG | TCGGCGTCGC | GCTTTTTTTG |
| 13351 | CTGCCTCCGG | CATTTCCCAA | CAACGGGATA | GAGAGCCTAG | TGGACAAGAT |
|       | GACGGAGGCC | GTAAAGGGTT | GTTGCCCTAT | CTCTCGGATC | ACCTGTTCTA |
| 13401 | GAGTAGATGG | AAGACGTACG | CGCAGGAGCA | CAGGGACGTG | CCAGGCCCCG |
|       | CTCATCTACC | TTCTGCATGC | GCGTCCTCGT | GTCCCTGCAC | GGTCCGGGCG |
| 13451 | GCCCGCCAC  | CCGTCGTCAA | AGGCACGACC | GTCAGCGGGG | TCTGGTGTGG |
|       | CGGGCGGGTG | GGCAGCAGTT | TCCGTGCTGG | CAGTCGCCCC | AGACCACACC |
| 13501 | GAGGACGATG | ACTCGGCAGA | CGACAGCAGC | GTCCTGGATT | TGGGAGGGAG |
|       | CTCCTGCTAC | TGAGCCGTCT | GCTGTCGTCG | CAGGACCTAA | ACCCTCCCTC |
| 13551 | TGGCAACCCG | TTTGCGCACC | TTCGCCCCAG | GCTGGGGAGA | ATGTTTTTAA |
|       | ACCGTTGGGC | AAACGCGTGG | AAGCGGGGTC | CGACCCCTCT | TACAAAATTT |

FIG. 16A-17

|       |                           |                          |                          |                           |                          |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 13601 | AAAAAAAAAA<br>TTTTTTTTTT  | GCATGATGCA<br>CGTACTACGT | AAATAAAAAA<br>TTTATTTTTT | CTCACCAAGG<br>GAGTGGTTCC  | CCATGGCACC<br>GGTACCGTGG |
| 13651 | GAGCGTTGGT<br>CTCGCAACCA  | TTTCTTGTAT<br>AAAGAACATA | TCCCCTTAGT<br>AGGGGAATCA | ATGCGGCGCG<br>TACGCCGCGC  | CGGCGATGTA<br>GCCGCTACAT |
| 13701 | TGAGGAAGGT<br>ACTCCTTCCA  | CCTCCTCCCT<br>GGAGGAGGGA | CCTACGAGAG<br>GGATGCTCTC | TGTGGTGAGC<br>ACACCACTCG  | GCGGCGCCAG<br>CGCCGCGGTC |
| 13751 | TGGCGGCGGC<br>ACCGCCGCCG  | GCTGGGTTCT<br>CGACCCAAGA | CCCTTCGATG<br>GGGAAGCTAC | CTCCCCTGGA<br>GAGGGGACCT  | CCCGCCGTTT<br>GGGCGGCAAA |
| 13801 | GTGCCTCCGC<br>CACGGAGGCG  | GGTACCTGCG<br>CCATGGACGC | GCCTACCGGG<br>CGGATGGCCC | GGGAGAAACA<br>CCCTCTTTGT  | GCATCCGTTA<br>CGTAGGCAAT |
| 13851 | CTCTGAGTTG<br>GAGACTCAAC  | GCACCCCTAT<br>CGTGGGGATA | TCGACACCAC<br>AGCTGTGGTG | CCGTGTGTAC<br>GGCACACATG  | CTGGTGGACA<br>GACCACCTGT |
| 13901 | ACAAGTCAAC<br>TGTTCAAGTTG | GGATGTGGCA<br>CCTACACCGT | TCCCTGAACT<br>AGGGACTTGA | ACCAGAACGA<br>TGGTCTTGCT  | CCACAGCAAC<br>GGTGTCGTTG |
| 13951 | TTTCTGACCA<br>AAAGACTGGT  | CGGTCATTCA<br>GCCAGTAAGT | AAACAATGAC<br>TTTGTTACTG | TACAGCCCGG<br>ATGTCGGGCC  | GGGAGGCAAG<br>CCCTCCGTTC |
| 14001 | CACACAGACC<br>GTGTGTCTGG  | ATCAATCTTG<br>TAGTTAGAAC | ACGACCGGTC<br>TGCTGGCCAG | GCACTGGGGC<br>CGTGACCCCG  | GGCGACCTGA<br>CCGCTGGACT |
| 14051 | AAACCATCCT<br>TTTGGTAGGA  | GCATACCAAC<br>CGTATGGTTG | ATGCCAAATG<br>TACGGTTTAC | TGAACGAGTT<br>ACTTGCTCAA  | CATGTTTACC<br>GTACAAATGG |
| 14101 | AATAAGTTTA<br>TTATTCAAAT  | AGGCGCGGGT<br>TCCGCGCCCA | GATGGTGTCG<br>CTACCACAGC | CGCTTGCCCTA<br>GCGAACGGAT | CTAAGGACAA<br>GATTCCTGTT |
| 14151 | TCAGGTGGAG<br>AGTCCACCTC  | CTGAAATACG<br>GACTTTATGC | AGTGGGTGGA<br>TCACCCACCT | GTTACGCTG<br>CAAGTGCGAC   | CCCGAGGGCA<br>GGGCTCCCGT |
| 14201 | ACTACTCCGA<br>TGATGAGGCT  | GACCATGACC<br>CTGGTACTGG | ATAGACCTTA<br>TATCTGGAAT | TGAACAACGC<br>ACTTGTTGCG  | GATCGTGGAG<br>CTAGCACCTC |
| 14251 | CACTACTTGA<br>GTGATGAACT  | AAGTGGGCAG<br>TTCACCCGTC | ACAGAACGGG<br>TGTCTTGCCC | GTTCTGGAAA<br>CAAGACCTTT  | GCGACATCGG<br>CGCTGTAGCC |
| 14301 | GGTAAAGTTT<br>CCATTTCAA   | GACACCCGCA<br>CTGTGGGCGT | ACTTCAGACT<br>TGAAGTCTGA | GGGGTTTGAC<br>CCCCAAACTG  | CCCGTCACTG<br>GGGCAGTGAC |
| 14351 | GTCTTGTCAT<br>CAGAACAGTA  | GCCTGGGGTA<br>CGGACCCCAT | TATACAAACG<br>ATATGTTTGC | AAGCCTTCCA<br>TTCGGAAGGT  | TCCAGACATC<br>AGGTCTGTAG |

FIG. 16A-18

|       |                          |                           |                          |                          |                          |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 14401 | ATTTTGCTGC<br>TAAAACGACG | CAGGATGCGG<br>GTCCTACGCC  | GGTGGACTTC<br>CCACCTGAAG | ACCCACAGCC<br>TGGGTGTCGG | GCCTGAGCAA<br>CGGACTCGTT |
| 14451 | CTTGTTGGGC<br>GAACAACCCG | ATCCGCAAGC<br>TAGGCGTTTCG | GGCAACCCTT<br>CCGTTGGGAA | CCAGGAGGGC<br>GGTCCTCCCG | TTTAGGATCA<br>AAATCCTAGT |
| 14501 | CCTACGATGA<br>GGATGCTACT | TCTGGAGGGT<br>AGACCTCCCA  | GGTAACATTC<br>CCATTGTAAG | CCGCACTGTT<br>GGCGTGACAA | GGATGTGGAC<br>CCTACACCTG |
| 14551 | GCCTACCAGG<br>CGGATGGTCC | CGAGCTTGAA<br>GCTCGAACTT  | AGATGACACC<br>TCTACTGTGG | GAACAGGGCG<br>CTTGTCCCGC | GGGGTGGCGC<br>CCCCACCGCG |
| 14601 | AGGCGGCAGC<br>TCCGCCGTCG | AACAGCAGTG<br>TTGTCGTCAC  | GCAGCGGCGC<br>CGTCGCCGCG | GGAAGAGAAC<br>CCTTCTCTTG | TCCAACGCGG<br>AGGTTGCGCC |
| 14651 | CAGCCGCGGC<br>GTCGGCGCCG | AATGCAGCCG<br>TTACGTCGGC  | GTGGAGGACA<br>CACCTCCTGT | TGAACGATCA<br>ACTTGCTAGT | TGCCATTCGC<br>ACGGTAAGCG |
| 14701 | GGCGACACCT<br>CCGCTGTGGA | TTGCCACACG<br>AACGGTGTGC  | GGCTGAGGAG<br>CCGACTCCTC | AAGCGCGCTG<br>TTCGCGCGAC | AGGCCGAAGC<br>TCCGGCTTCG |
| 14751 | AGCGGCCGAA<br>TCGCCGGCTT | GCTGCCGCCC<br>CGACGGCGGG  | CCGCTGCGCA<br>GGCGACGCGT | ACCCGAGGTC<br>TGGGCTCCAG | GAGAAGCCTC<br>CTCTTCGGAG |
| 14801 | AGAAGAAACC<br>TCTTCTTTGG | GGTGATCAAA<br>CCACTAGTTT  | CCCCTGACAG<br>GGGGACTGTC | AGGACAGCAA<br>TCCTGTCGTT | GAAACGCAGT<br>CTTTGCGTCA |
| 14851 | TACAACCTAA<br>ATGTTGGATT | TAAGCAATGA<br>ATTCGTTACT  | CAGCACCTTC<br>GTCGTGGAAG | ACCCAGTACC<br>TGGGTCATGG | GCAGCTGGTA<br>CGTCGACCAT |
| 14901 | CCTTGCATAC<br>GGAACGTATG | AACTACGGCG<br>TTGATGCCGC  | ACCCTCAGAC<br>TGGGAGTCTG | CGGAATCCGC<br>GCCTTAGGCG | TCATGGACCC<br>AGTACCTGGG |
| 14951 | TGCTTTGCAC<br>ACGAAACGTG | TCCTGACGTA<br>AGGACTGCAT  | ACCTGCGGCT<br>TGGACGCCGA | CGGAGCAGGT<br>GCCTCGTCCA | CTACTGGTCG<br>GATGACCAGC |
| 15001 | TTGCCAGACA<br>AACGGTCTGT | TGATGCAAGA<br>ACTACGTTCT  | CCCCGTGACC<br>GGGGCACTGG | TTCCGCTCCA<br>AAGGCGAGGT | CGCGCCAGAT<br>GCGCGGTCTA |
| 15051 | CAGCAACTTT<br>GTCGTTGAAA | CCGGTGGTGG<br>GGCCACCACC  | GCGCCGAGCT<br>CGCGGCTCGA | GTTGCCCGTG<br>CAACGGGCAC | CACTCCAAGA<br>GTGAGGTTCT |
| 15101 | GCTTCTACAA<br>CGAAGATGTT | CGACCAGGCC<br>GCTGGTCCGG  | GTCTACTCCC<br>CAGATGAGGG | AACTCATCCG<br>TTGAGTAGGC | CCAGTTTACC<br>GGTCAAATGG |
| 15151 | TCTCTGACCC<br>AGAGACTGGG | ACGTGTTCAA<br>TGCACAAGTT  | TCGCTTTCCC<br>AGCGAAAGGG | GAGAACCAGA<br>CTCTTGGTCT | TTTTGGCGCG<br>AAAACCGCGC |

FIG. 16A-19



|       |                          |                           |                          |                           |                          |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 15201 | CCCGCCAGCC<br>GGGCGGTCGG | CCCACCATCA<br>GGGTGGTAGT  | CCACCGTCAG<br>GGTGGCAGTC | TGAAAACGTT<br>ACTTTTGCAA  | CCTGCTCTCA<br>GGACGAGAGT |
| 15251 | CAGATCACGG<br>GTCTAGTGCC | GACGCTACCG<br>CTGCGATGGC  | CTGCGCAACA<br>GACGCGTTGT | GCATCGGAGG<br>CGTAGCCTCC  | AGTCCAGCGA<br>TCAGGTCGCT |
| 15301 | GTGACCATTA<br>CACTGGTAAT | CTGACGCCAG<br>GACTGCGGTC  | ACGCCGCACC<br>TGCGGCGTGG | TGCCCCCTACG<br>ACGGGGATGC | TTTACAAGGC<br>AAATGTTCCG |
| 15351 | CCTGGGCATA<br>GGACCCGTAT | GTCTCGCCGC<br>CAGAGCGGCG  | GCGTCCTATC<br>CGCAGGATAG | GAGCCGCACT<br>CTCGGCGTGA  | TTTGTAGCAA<br>AAAACTCGTT |
| 15401 | GCATGTCCAT<br>CGTACAGGTA | CCTTATATCG<br>GGAATATAGC  | CCCAGCAATA<br>GGGTCGTTAT | ACACAGGCTG<br>TGTGTCCGAC  | GGGCCTGCGC<br>CCCGGACGCG |
| 15451 | TTCCCAAGCA<br>AAGGGTTCGT | AGATGTTTGG<br>TCTACAAACC  | CGGGGCCAAG<br>GCCCCGGTTC | AAGCGCTCCG<br>TTCGCGAGGC  | ACCAACACCC<br>TGGTTGTGGG |
| 15501 | AGTGCGCGTG<br>TCACGCGCAC | CGCGGGCACT<br>GCGCCC GTGA | ACCGCGCGCC<br>TGGCGCGCGG | CTGGGGCGCG<br>GACCCCGCGC  | CACAAACGCG<br>GTGTTTGCGC |
| 15551 | GCCGCACTGG<br>CGGCGTGACC | GCGCACCACC<br>CGCGTG GTGG | GTCGATGACG<br>CAGCTACTGC | CCATCGACGC<br>GGTAGCTGCG  | GGTGGTGGAG<br>CCACCACCTC |
| 15601 | GAGGCGCGCA<br>CTCCGCGCGT | ACTACACGCC<br>TGATGTGCGG  | CACGCCGCCA<br>GTGCGGCGGT | CCAGTGTCCA<br>GGTCACAGGT  | CAGTGGACGC<br>GTCACCTGCG |
| 15651 | GGCCATTCAG<br>CCGGTAAGTC | ACCGTGGTGC<br>TGGCACACAG  | GCGGAGCCCG<br>CGCCTCGGGC | GCGCTATGCT<br>CGCGATACGA  | AAAATGAAGA<br>TTTTACTTCT |
| 15701 | GACGGCGGAG<br>CTGCCGCCTC | GCGCGTAGCA<br>CGCGCATCGT  | CGTCGCCACC<br>GCAGCGGTGG | GCCGCCGACC<br>CGGCGGCTGG  | CGGCACTGCC<br>GCCGTGACGG |
| 15751 | GCCCAACGCG<br>CGGGTTGCGC | CGGCGGCGGC<br>GCCGCCGCCG  | CCTGCTTAAC<br>GGACGAATTG | CGCGCACGTC<br>GCGCGTG CAG | GCACCGGCCG<br>CGTGGCCGGC |
| 15801 | ACGGGCGGCC<br>TGCCCGCCGG | ATGCGGGCCG<br>TACGCCCGGC  | CTCGAAGGCT<br>GAGCTTCCGA | GGCCGCGGGT<br>CCGGCGCCCA  | ATTGTCACTG<br>TAACAGTGAC |
| 15851 | TGCCCCCAG<br>ACGGGGGGTC  | GTCCAGGCGA<br>CAGGTCCGCT  | CGAGCGGCCG<br>GCTCGCCGGC | CCGCAGCAGC<br>GGCGTCGTCG  | CGCGGCCATT<br>GCGCCGGTAA |
| 15901 | AGTGCTATGA<br>TCACGATACT | CTCAGGGTCG<br>GAGTCCCAGC  | CAGGGGCAAC<br>GTCCCCGTTG | GTGTATTGGG<br>CACATAACCC  | TGCGCGACTC<br>ACGCGCTGAG |
| 15951 | GGTTAGCGGC<br>CCAATCGCCG | CTGCGCGTGC<br>GACGCGCACG  | CCGTGCGCAC<br>GGCACGCGTG | CCGCCCCCCG<br>GGCGGGGGGC  | CGCAACTAGA<br>GCGTTGATCT |

FIG. 16A-20

|       |                           |                          |                           |                          |                          |
|-------|---------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| 16001 | TTGCAAGAAA<br>AACGTTCTTT  | AAACTACTTA<br>TTTGATGAAT | GACTCGTACT<br>CTGAGCATGA  | GTTGTATGTA<br>CAACATACAT | TCCAGCGGCG<br>AGGTCGCCGC |
| 16051 | GCGGCGCGCA<br>CGCCGCGCGT  | ACGAAGCTAT<br>TGCTTCGATA | GTCCAAGCGC<br>CAGGTTGCGC  | AAAATCAAAG<br>TTTtagTTTC | AAGAGATGCT<br>TTCTCTACGA |
| 16101 | CCAGGTCATC<br>GGTCCAGTAG  | GCGCCGGAGA<br>CGCGGCCTCT | TCTATGGCCC<br>AGATACCGGG  | CCCGAAGAAG<br>GGGCTTCTTC | GAAGAGCAGG<br>CTTCTCGTCC |
| 16151 | ATTACAAGCC<br>TAATGTTTCGG | CCGAAAGCTA<br>GGCTTTCGAT | AAGCGGGTCA<br>TTCGCCCAGT  | AAAAGAAAAA<br>TTTTCTTTTT | GAAAGATGAT<br>CTTTCTACTA |
| 16201 | GATGATGAAC<br>CTACTACTTG  | TTGACGACGA<br>AACTGCTGCT | GGTGGAAGTG<br>CCACCTTGAC  | CTGCACGCTA<br>GACGTGCGAT | CCGCGCCCAG<br>GGCGCGGGTC |
| 16251 | GCGACGGGTA<br>CGCTGCCCAT  | CAGTGGAAG<br>GTCACCTTTC  | GTCGACGCGT<br>CAGCTGCGCA  | AAAACGTGTT<br>TTTTGCACAA | TTGCGACCCG<br>AACGCTGGGC |
| 16301 | GCACCACCGT<br>CGTGGTGGCA  | AGTCTTTACG<br>TCAGAAATGC | CCCGGTGAGC<br>GGGCCACTCG  | GCTCCACCCG<br>CGAGGTGGGC | CACCTACAAG<br>GTGGATGTTC |
| 16351 | CGCGTGTATG<br>GCGCACATAC  | ATGAGGTGTA<br>TACTCCACAT | CGGCGACGAG<br>GCCGCTGCTC  | GACCTGCTTG<br>CTGGACGAAC | AGCAGGCCAA<br>TCGTCCGGTT |
| 16401 | CGAGCGCCTC<br>GCTCGCGGAG  | GGGGAGTTTG<br>CCCCTCAAAC | CCTACGGAAA<br>GGATGCCTTT  | GCGGCATAAG<br>CGCCGTATTC | GACATGCTGG<br>CTGTACGACC |
| 16451 | CGTTGCCGCT<br>GCAACGGCGA  | GGACGAGGGC<br>CCTGCTCCCG | AACCCAACAC<br>TTGGGTGTGTG | CTAGCCTAAA<br>GATCGGATTT | GCCCGTAACA<br>CGGGCATTGT |
| 16501 | CTGCAGCAGG<br>GACGTCGTCC  | TGCTGCCCCG<br>ACGACGGGCG | GCTTGCACCG<br>CGAACGTGGC  | TCCGAAGAAA<br>AGGCTTCTTT | AGCGCGGCCT<br>TCGCGCCGGA |
| 16551 | AAAGCGCGAG<br>TTTCGCGCTC  | TCTGGTGACT<br>AGACCACTGA | TGGCACCCAC<br>ACCGTGGGTG  | CGTGCAGCTG<br>GCACGTCGAC | ATGGTACCCA<br>TACCATGGGT |
| 16601 | AGCGCCAGCG<br>TCGCGGTCGC  | ACTGGAAGAT<br>TGACCTTCTA | GTCTTGGA<br>CAGAACCTTT    | AAATGACCGT<br>TTTACTGGCA | GGAACCTGGG<br>CCTTGGACCC |
| 16651 | CTGGAGCCCG<br>GACCTCGGGC  | AGGTCCGCGT<br>TCCAGGCGCA | GCGGCCAATC<br>CGCCGGTTAG  | AAGCAGGTGG<br>TTCGTCCACC | CGCCGGGACT<br>GCGGCCCTGA |
| 16701 | GGGCGTGCAG<br>CCCGCACGTC  | ACCGTGGACG<br>TGGCACCTGC | TTCAGATACC<br>AAGTCTATGG  | CACTACCAGT<br>GTGATGGTCA | AGCACCAGTA<br>TCGTGGTCAT |
| 16751 | TTGCCACCGC<br>AACGGTGGCG  | CACAGAGGGC<br>GTGTCTCCCG | ATGGAGACAC<br>TACCTCTGTG  | AAACGTCCCC<br>TTTGCAGGGG | GGTTGCCTCA<br>CCAACGGAGT |

FIG. 16A-21

|       |                          |                           |                           |                          |                           |
|-------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 16801 | GCGGTGGCGG<br>CGCCACCGCC | ATGCCGCGGT<br>TACGGCGCCA  | GCAGGCGGTC<br>CGTCCGCCAG  | GCTGCGGCCG<br>CGACGCCGGC | CGTCCAAGAC<br>GCAGGTTCTG  |
| 16851 | CTCTACGGAG<br>GAGATGCCTC | GTGCAAACGG<br>CACGTTTGCC  | ACCCGTGGAT<br>TGGGCACCTA  | GTTTCGCGTT<br>CAAAGCGCAA | TCAGCCCCCC<br>AGTCGGGGGG  |
| 16901 | GGCGCCCGCG<br>CCGCGGGCGC | CCGTTCGAGG<br>GGCAAGCTCC  | AAGTACGGCG<br>TTCATGCCGC  | CCGCCAGCGC<br>GGCGGTCGCG | GCTACTGCCC<br>CGATGACGGG  |
| 16951 | GAATATGCCC<br>CTTATACGGG | TACATCCTTC<br>ATGTAGGAAG  | CATTGCGCCT<br>GTAACGCGGA  | ACCCCCGGCT<br>TGGGGGCCGA | ATCGTGGCTA<br>TAGCACCGAT  |
| 17001 | CACCTACCGC<br>GTGGATGGCG | CCCAGAAGAC<br>GGGTCTTCTG  | GAGCAACTAC<br>CTCGTTGATG  | CCGACGCCGA<br>GGCTGCGGCT | ACCACCACTG<br>TGGTGGTGAC  |
| 17051 | GAACCCGCCG<br>CTTGGGCGGC | CCGCCGTCGC<br>GGCGGCAGCG  | CGTCGCCAGC<br>GCAGCGGTCTG | CCGTGCTGGC<br>GGCACGACCG | CCCGATTTC<br>GGGCTAAAGG   |
| 17101 | GTGCGCAGGG<br>CACGCGTCCC | TGGCTCGCGA<br>ACCGAGCGCT  | AGGAGGCAGG<br>TCCTCCGTCC  | ACCCTGGTGC<br>TGGGACCACG | TGCCAACAGC<br>ACGGTTGTCTG |
| 17151 | GCGCTACCAC<br>CGCGATGGTG | CCCAGCATCG<br>GGGTCGTAGC  | TTTAAAAGCC<br>AAATTTTCGG  | GGTCTTTGTG<br>CCAGAAACAC | GTTCTTGCAG<br>CAAGAACGTC  |
| 17201 | ATATGGCCCT<br>TATACCGGGA | CACCTGCCGC<br>GTGGACGGCG  | CTCCGTTTCC<br>GAGGCAAAGG  | CGGTGCCGGG<br>GCCACGGCCC | ATTCCGAGGA<br>TAAGGCTCCT  |
| 17251 | AGAATGCACC<br>TCTTACGTGG | GTAGGAGGGG<br>CATCCTCCCC  | CATGGCCGGC<br>GTACCGGCCG  | CACGGCCTGA<br>GTGCCGGACT | CGGGCGGCAT<br>GCCCGCCGTA  |
| 17301 | GCGTCGTGCG<br>CGCAGCACGC | CACCACCGGC<br>GTGGTGGCCG  | GGCGGCGCGC<br>CCGCCGCGCG  | GTCGCACCGT<br>CAGCGTGGCA | CGCATGCGCG<br>GCGTACGCGC  |
| 17351 | GCGGTATCCT<br>CGCCATAGGA | GCCCCTCCTT<br>CGGGGAGGAA  | ATTCCACTGA<br>TAAGGTGACT  | TCGCCGCGGC<br>AGCGGCGCCG | GATTGGCGCC<br>CTAACCGCGG  |
| 17401 | GTGCCCCGAA<br>CACGGGCCTT | TTGCATCCGT<br>AACGTAGGCA  | GGCCTTGCAG<br>CCGGAACGTC  | GCGCAGAGAC<br>CGCGTCTCTG | ACTGATTAAA<br>TGACTAATTT  |
| 17451 | AACAAGTTGC<br>TTGTTCAACG | ATGTGGAAAA<br>TACACCTTTT  | ATCAAAATAA<br>TAGTTTTATT  | AAAGTCTGGA<br>TTTCAGACCT | CTCTCACGCT<br>GAGAGTGCGA  |
| 17501 | CGCTTGGTCC<br>GCGAACCAGG | TGTAACCTATT<br>ACATTGATAA | TTGTAGAATG<br>AACATCTTAC  | GAAGACATCA<br>CTTCTGTAGT | ACTTTGCGTC<br>TGAAACGCAG  |
| 17551 | TCTGGCCCCG<br>AGACCGGGGC | CGACACGGCT<br>GCTGTGCCGA  | CGCGCCCGTT<br>GCGCGGGCAA  | CATGGGAAAC<br>GTACCCTTTG | TGGCAAGATA<br>ACCGTTCTAT  |

FIG. 16A-22

|       |                          |                           |                          |                          |                          |
|-------|--------------------------|---------------------------|--------------------------|--------------------------|--------------------------|
| 17601 | TCGGCACCAG<br>AGCCGTGGTC | CAATATGAGC<br>GTTATACTCG  | GGTGGCGCCT<br>CCACCGCGGA | TCAGCTGGGG<br>AGTCGACCCC | CTCGCTGTGG<br>GAGCGACACC |
| 17651 | AGCGGCATTA<br>TCGCCGTAAT | AAAATTTTCGG<br>TTTTAAAGCC | TTCCACCGTT<br>AAGGTGGCAA | AAGAACTATG<br>TTCTTGATAC | GCAGCAAGGC<br>CGTCGTTCCG |
| 17701 | CTGGAACAGC<br>GACCTTGTCG | AGCACAGGCC<br>TCGTGTCCGG  | AGATGCTGAG<br>TCTACGACTC | GGATAAGTTG<br>CCTATTCAAC | AAAGAGCAAA<br>TTTCTCGTTT |
| 17751 | ATTTCCAACA<br>TAAAGGTTGT | AAAGGTGGTA<br>TTTCCACCAT  | GATGGCCTGG<br>CTACCGGACC | CCTCTGGCAT<br>GGAGACCGTA | TAGCGGGGTG<br>ATCGCCCCAC |
| 17801 | GTGGACCTGG<br>CACCTGGACC | CCAACCAGGC<br>GGTTGGTCCG  | AGTGCAAAAT<br>TCACGTTTTA | AAGATTAACA<br>TTCTAATTGT | GTAAGCTTGA<br>CATTCGAACT |
| 17851 | TCCCCGCCCT<br>AGGGGCGGGA | CCCGTAGAGG<br>GGGCATCTCC  | AGCCTCCACC<br>TCGGAGGTGG | GGCCGTGGAG<br>CCGGCACCTC | ACAGTGTCTC<br>TGTCACAGAG |
| 17901 | CAGAGGGGCG<br>GTCTCCCCGC | TGGCGAAAAG<br>ACCGCTTTTC  | CGTCCGCGCC<br>GCAGGCGCGG | CCGACAGGGA<br>GGCTGTCCCT | AGAAACTCTG<br>TCTTTGAGAC |
| 17951 | GTGACGCAAA<br>CACTGCGTTT | TAGACGAGCC<br>ATCTGCTCGG  | TCCCTCGTAC<br>AGGGAGCATG | GAGGAGGCAC<br>CTCCTCCGTG | TAAAGCAAGG<br>ATTTCGTTCC |
| 18001 | CCTGCCCACC<br>GGACGGGTGG | ACCCGTCCCA<br>TGGGCAGGGT  | TCGCGCCCAT<br>AGCGCGGGTA | GGCTACCGGA<br>CCGATGGCCT | GTGCTGGGCC<br>CACGACCCGG |
| 18051 | AGCACACACC<br>TCGTGTGTGG | CGTAACGCTG<br>GCATTGCGAC  | GACCTGCCTC<br>CTGGACGGAG | CCCCGCCGA<br>GGGGGCGGCT  | CACCCAGCAG<br>GTGGGTCTGC |
| 18101 | AAACCTGTGC<br>TTTGGACACG | TGCCAGGCCC<br>ACGGTCCGGG  | GACCGCCGTT<br>CTGGCGGCAA | GTTGTAACCC<br>CAACATTGGG | GTCCTAGCCG<br>CAGGATCGGC |
| 18151 | CGCGTCCCTG<br>GCGCAGGGAC | CGCCGCGCCG<br>GCGGCGCGGC  | CCAGCGGTCC<br>GGTCGCCAGG | GCGATCGTTG<br>CGCTAGCAAC | CGGCCCGTAG<br>GCCGGGCATC |
| 18201 | CCAGTGGCAA<br>GGTCACCGTT | CTGGCAAAGC<br>GACCGTTTTC  | ACACTGAACA<br>TGTGACTTGT | GCATCGTGGG<br>CGTAGCACC  | TCTGGGGGTG<br>AGACCCCCAC |
| 18251 | CAATCCCTGA<br>GTTAGGGACT | AGCGCCGACG<br>TCGCGGCTGC  | ATGCTTCTGA<br>TACGAAGACT | TAGCTAACGT<br>ATCGATTGCA | GTCGTATGTG<br>CAGCATACAC |
| 18301 | TGTCATGTAT<br>ACAGTACATA | GCGTCCATGT<br>CGCAGGTACA  | CGCCGCCAGA<br>GCGGCGGTCT | GGAGCTGCTG<br>CCTCGACGAC | AGCCGCCGCG<br>TCGGCGGCGC |
| 18351 | CGCCCGCTTT<br>GCGGGCGAAA | CCAAGATGGC<br>GGTTCTACCG  | TACCCCTTCG<br>ATGGGGAAGC | ATGATGCCGC<br>TACTACGGCG | AGTGGTCTTA<br>TCACCAGAAT |

FIG. 16A-23



|       |             |             |             |            |             |
|-------|-------------|-------------|-------------|------------|-------------|
| 18401 | CATGCACATC  | TCGGGCCAGG  | ACGCCTCGGA  | GTACCTGAGC | CCCGGGCTGG  |
|       | GTACGTGTAG  | AGCCCGGTCC  | TGCGGAGCCT  | CATGGACTCG | GGGCCCCGACC |
| 18451 | TGCAGTTTGC  | CCGCGCCACC  | GAGACGTACT  | TCAGCCTGAA | TAACAAGTTT  |
|       | ACGTCAAACG  | GGCGCGGTGG  | CTCTGCATGA  | AGTCGGACTT | ATTGTTCAAA  |
| 18501 | AGAAACCCCA  | CGGTGGCGCC  | TACGCACGAC  | GTGACCACAG | ACCGGTCCCA  |
|       | TCTTTGGGGT  | GCCACCGCGG  | ATGCGTGCTG  | CACTGGTGTC | TGGCCAGGGT  |
| 18551 | GCGTTTGACG  | CTGCGGTTCA  | TCCCTGTGGA  | CCGTGAGGAT | ACTGCGTACT  |
|       | CGCAAAC TGC | GACGCCAAGT  | AGGGACACCT  | GGCACTCCTA | TGACGCATGA  |
| 18601 | CGTACAAGGC  | GCGGTTCACC  | CTAGCTGTGG  | GTGATAACCG | TGTGCTGGAC  |
|       | GCATGTTCCG  | CGCCAAGTGG  | GATCGACACC  | CACTATTGGC | ACACGACCTG  |
| 18651 | ATGGCTTCCA  | CGTACTTTGA  | CATCCGCGGC  | GTGCTGGACA | GGGGCCCTAC  |
|       | TACCGAAGGT  | GCATGAAACT  | GTAGGCGCCG  | CACGACCTGT | CCCCGGGATG  |
| 18701 | TTTTAAGCCC  | TACTCTGGCA  | CTGCCTACAA  | CGCCCTGGCT | CCCAAGGGTG  |
|       | AAAATTCGGG  | ATGAGACCGT  | GACGGATGTT  | GCGGGACCGA | GGGTTCCCAC  |
| 18751 | CCCCAAATCC  | TTGCGAATGG  | GATGAAGCTG  | CTACTGCTCT | TGAAATAAAC  |
|       | GGGGTTTAGG  | AACGCTTACC  | CTACTTCGAC  | GATGACGAGA | ACTTTATT TG |
| 18801 | CTAGAAGAAG  | AGGACGATGA  | CAACGAAGAC  | GAAGTAGACG | AGCAAGCTGA  |
|       | GATCTTCTTC  | TCCTGCTACT  | GTTGCTTCTG  | CTTCATCTGC | TCGTTCGACT  |
| 18851 | GCAGCAAAAA  | ACTCACGTAT  | TTGGGCAGGC  | GCCTTATTCT | GGTATAAATA  |
|       | CGTCGTTTTT  | TGAGTGCATA  | AACCCGTCCG  | CGGAATAAGA | CCATATTTAT  |
| 18901 | TTACAAAGGA  | GGGTATTCAA  | ATAGGTGTCTG | AAGGTCAAAC | ACCTAAATAT  |
|       | AATGTTTCCT  | CCCATAAGTT  | TATCCACAGC  | TTCCAGTTTG | TGGATTTATA  |
| 18951 | GCCGATAAAA  | CATTTCAACC  | TGAACCTCAA  | ATAGGAGAAT | CTCAGTGGTA  |
|       | CGGCTATTTT  | GTAAAGTTGG  | ACTTGGAGTT  | TATCCTCTTA | GAGTCACCAT  |
| 19001 | CGAAACAGAA  | ATTAATCATG  | CAGCTGGGAG  | AGTCCTAAAA | AAGACTACCC  |
|       | GCTTTGTCTT  | TAATTAGTAC  | GTCGACCCTC  | TCAGGATTTT | TTCTGATGGG  |
| 19051 | CAATGAAACC  | ATGTTACGGT  | TCATATGCAA  | AACCCACAAA | TGAAAATGGA  |
|       | GTTACTTTGG  | TACAATGCCA  | AGTATACGTT  | TTGGGTGTTT | ACTTTTACCT  |
| 19101 | GGGCAAGGCA  | TTCTTGTA AA | GCAACAAAAT  | GGAAAGCTAG | AAAGTCAAGT  |
|       | CCCGTTCCGT  | AAGAACATTT  | CGTTGTTTTA  | CCTTTCGATC | TTTCAGTTCA  |
| 19151 | GGAAATGCAA  | TTTTTCTCAA  | CTACTGAGGC  | AGCCGCAGGC | AATGGTGATA  |
|       | CCTTTACGTT  | AAAAAGAGTT  | GATGACTCCG  | TCGGCGTCCG | TTACCACTAT  |

FIG. 16A-24

|       |                           |                           |                          |                           |                          |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|--------------------------|
| 19201 | ACTTGACTCC<br>TGAAGTGGTA  | TAAAGTGGTA<br>ATTTACCCAT  | TTGTACAGTG<br>AACATGTCAC | AAGATGTAGA<br>TTCTACATCT  | TATAGAAACC<br>ATATCTTTGG |
| 19251 | CCAGACACTC<br>GGTCTGTGAG  | ATATTTCTTA<br>TATAAAGAAT  | CATGCCCACT<br>GTACGGGTGA | ATTAAGGAAG<br>TAATTCCTTC  | GTAAGTCACG<br>CATTGAGTGC |
| 19301 | AGAACTAATG<br>TCTTGATTAC  | GGCCAACAAT<br>CCGGTTGTTA  | CTATGCCCAA<br>GATACGGGTT | CAGGCCTAAT<br>GTCCGGATTA  | TACATTGCTT<br>ATGTAACGAA |
| 19351 | TTAGGGACAA<br>AATCCCTGTT  | TTTTATTGGT<br>AAAATAACCA  | CTAATGTATT<br>GATTACATAA | ACAACAGCAC<br>TGTTGTCGTG  | GGGTAATATG<br>CCCATTATAC |
| 19401 | GGTGTTCTGG<br>CCACAAGACC  | CGGGCCAAGC<br>GCCCCGGTTCG | ATCGCAGTTG<br>TAGCGTCAAC | AATGCTGTTG<br>TTACGACAAC  | TAGATTTGCA<br>ATCTAAACGT |
| 19451 | AGACAGAAAC<br>TCTGTCTTTG  | ACAGAGCTTT<br>TGTCTCGAAA  | CATACCAGCT<br>GTATGGTCGA | TTTGCTTGAT<br>AAACGAACTA  | TCCATTGGTG<br>AGGTAACCAC |
| 19501 | ATAGAACCAG<br>TATCTTGGTC  | GTACTTTTCT<br>CATGAAAAGA  | ATGTGGAATC<br>TACACCTTAG | AGGCTGTTGA<br>TCCGACAACCT | CAGCTATGAT<br>GTCGATACTA |
| 19551 | CCAGATGTTA<br>GGTCTACAAT  | GAATTATTGA<br>CTTAATAACT  | AAATCATGGA<br>TTTAGTACCT | ACTGAAGATG<br>TGACTTCTAC  | AACTTCCAAA<br>TTGAAGGTTT |
| 19601 | TTACTGCTTT<br>AATGACGAAA  | CCACTGGGAG<br>GGTGACCCTC  | GTGTGATTAA<br>CACACTAATT | TACAGAGACT<br>ATGTCTCTGA  | CTTACCAAGG<br>GAATGGTTCC |
| 19651 | TAAAACCTAA<br>ATTTTGGATT  | AACAGGTCAG<br>TTGTCCAGTC  | GAAAATGGAT<br>CTTTTACCTA | GGGAAAAAGA<br>CCCTTTTTTCT | TGCTACAGAA<br>ACGATGTCTT |
| 19701 | TTTTTCAGATA<br>AAAAGTCTAT | AAAATGAAAT<br>TTTTACTTTA  | AAGAGTTGGA<br>TTCTCAACCT | AATAATTTTG<br>TTATTAAAC   | CCATGGAAAT<br>GGTACCTTTA |
| 19751 | CAATCTAAAT<br>GTTAGATTTA  | GCCAACCTGT<br>CGGTTGGACA  | GGAGAAATTT<br>CCTCTTTAAA | CCTGTACTCC<br>GGACATGAGG  | AACATAGCGC<br>TTGTATCGCG |
| 19801 | TGTATTTGCC<br>ACATAAACGG  | CGACAAGCTA<br>GCTGTTTCGAT | AAGTACAGTC<br>TTCATGTCAG | CTTCCAACGT<br>GAAGGTTGCA  | AAAAATTTCT<br>TTTTTAAAGA |
| 19851 | GATAACCCAA<br>CTATTGGGTT  | ACACCTACGA<br>TGTGGATGCT  | CTACATGAAC<br>GATGTACTTG | AAGCGAGTGG<br>TTCGCTCACC  | TGGCTCCCGG<br>ACCGAGGGCC |
| 19901 | GCTAGTGGAC<br>CGATCACCTG  | TGCTACATTA<br>ACGATGTAAT  | ACCTTGGAGC<br>TGGAACCTCG | ACGCTGGTCC<br>TGCGACCAGG  | CTTGACTATA<br>GAACTGATAT |
| 19951 | TGGACAACGT<br>ACCTGTTGCA  | CAACCCATTT<br>GTTGGGTAAA  | AACCACCACC<br>TTGGTGGTGG | GCAATGCTGG<br>CGTTACGACC  | CCTGCGCTAC<br>GGACGCGATG |

FIG. 16A-25

|       |                          |                           |                           |                           |                           |
|-------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 20001 | CGCTCAATGT<br>GCGAGTTACA | TGCTGGGCAA<br>ACGACCCGTT  | TGGTCGCTAT<br>ACCAGCGATA  | GTGCCCTTCC<br>CACGGGAAGG  | ACATCCAGGT<br>TGTAGGTCCA  |
| 20051 | GCCTCAGAAG<br>CGGAGTCTTC | TTCTTTGCCA<br>AAGAAACGGT  | TTAAAAACCT<br>AATTTTTTGA  | CCTTCTCCTG<br>GGAAGAGGAC  | CCGGGCTCAT<br>GGCCCGAGTA  |
| 20101 | ACACCTACGA<br>TGTGGATGCT | GTGGAAC TTC<br>CACCTTGAAG | AGGAAGGATG<br>TCCTTCCTAC  | TTAACATGGT<br>AATTGTACCA  | TCTGCAGAGC<br>AGACGTCTCG  |
| 20151 | TCCCTAGGAA<br>AGGGATCCTT | ATGACCTAAG<br>TACTGGATTC  | GGTTGACGGA<br>CCAAC TGCCT | GCCAGCATTA<br>CGGTCGTAAT  | AGTTTGATAG<br>TCAAAC TATC |
| 20201 | CATTTGCCTT<br>GTAAACGGAA | TACGCCACCT<br>ATGCGGTGGA  | TCTTCCCCAT<br>AGAAGGGGTA  | GGCCCACAAC<br>CCGGGTGTTG  | ACCGCCTCCA<br>TGGCGGAGGT  |
| 20251 | CGCTTGAGGC<br>GCGAACTCCG | CATGCTTAGA<br>GTACGAATCT  | AACGACACCA<br>TTGCTGTGGT  | ACGACCAGTC<br>TGCTGGTCAG  | CTTTAACGAC<br>GAAATTGCTG  |
| 20301 | TATCTCTCCG<br>ATAGAGAGGC | CCGCCAACAT<br>GGCGGTTGTA  | GCTCTACCCT<br>CGAGATGGGA  | ATACCCGCCA<br>TATGGGCGGT  | ACGCTACCAA<br>TGCGATGGTT  |
| 20351 | CGTGCCCATA<br>GCACGGGTAT | TCCATCCCCT<br>AGGTAGGGGA  | CCCGCAACTG<br>GGGCGTTGAC  | GGCGGCTTTC<br>CCGCCGAAAG  | CGCGGCTGGG<br>GCGCCGACCC  |
| 20401 | CCTTCACGCG<br>GGAAGTGCGC | CCTTAAGACT<br>GGAATTCTGA  | AAGGAAACCC<br>TTCCTTTGGG  | CATCACTGGG<br>GTAGTGACCC  | CTCGGGCTAC<br>GAGCCCGATG  |
| 20451 | GACCCTTATT<br>CTGGGAATAA | ACACCTACTC<br>TGTGGATGAG  | TGGCTCTATA<br>ACCGAGATAT  | CCCTACCTAG<br>GGGATGGATC  | ATGGAACCTT<br>TACCTTGGA   |
| 20501 | TTACCTCAAC<br>AATGGAGTTG | CACACCTTTA<br>GTGTGGAAAT  | AGAAGGTGGC<br>TCTTCCACCG  | CATTACCTTT<br>GTAATGGAAA  | GACTCTTCTG<br>CTGAGAAGAC  |
| 20551 | TCAGCTGGCC<br>AGTCGACCGG | TGGCAATGAC<br>ACCGTTACTG  | CGCCTGCTTA<br>GCGGACGAAT  | CCCCCAACGA<br>GGGGGTGCT   | GTTTGAAATT<br>CAAAC TTTAA |
| 20601 | AAGCGCTCAG<br>TTCGCGAGTC | TTGACGGGGA<br>AACTGCCCTT  | GGGTTACAAC<br>CCCAATGTTG  | GTTGCCCAGT<br>CAACGGGTCA  | GTAACATGAC<br>CATTGTACTG  |
| 20651 | CAAAGACTGG<br>GTTTCTGACC | TTCCTGGTAC<br>AAGGACCATG  | AAATGCTAGC<br>TTTACGATCG  | TAAC TATAAC<br>ATTGATATTG | ATTGGCTACC<br>TAACCGATGG  |
| 20701 | AGGGCTTCTA<br>TCCCGAAGAT | TATCCCAGAG<br>ATAGGGTCTC  | AGCTACAAGG<br>TCGATGTTCC  | ACCGCATGTA<br>TGGCGTACAT  | CTCCTTCTTT<br>GAGGAAGAAA  |
| 20751 | AGAAACTTCC<br>TCTTTGAAGG | AGCCCATGAG<br>TCGGGTACTC  | CCGTCAGGTG<br>GGCAGTCCAC  | GTGGATGATA<br>CACCTACTAT  | CTAAATACAA<br>GATTTATGTT  |

FIG. 16A-26

|       |            |             |            |            |             |
|-------|------------|-------------|------------|------------|-------------|
| 20801 | GGACTACCAA | CAGGTGGGCA  | TCCTACACCA | ACACAACAAC | TCTGGATTTG  |
|       | CCTGATGGTT | GTCCACCCGT  | AGGATGTGGT | TGTGTTGTTG | AGACCTAAAC  |
| 20851 | TTGGCTACCT | TGCCCCCACC  | ATGCGCGAAG | GACAGGCCTA | CCCTGCTAAC  |
|       | AACCGATGGA | ACGGGGGTGG  | TACGCGCTTC | CTGTCCGGAT | GGGACGATTG  |
| 20901 | TTCCCCTATC | CGCTTATAGG  | CAAGACCGCA | GTTGACAGCA | TTACCCAGAA  |
|       | AAGGGGATAG | GCGAATATCC  | GTTCTGGCGT | CAACTGTCGT | AATGGGTCTT  |
| 20951 | AAAGTTTCTT | TGCGATCGCA  | CCCTTTGGCG | CATCCCATTG | TCCAGTAACT  |
|       | TTTCAAAGAA | ACGCTAGCGT  | GGGAAACCGC | GTAGGGTAAG | AGGTCATTGA  |
| 21001 | TTATGTCCAT | GGGCGCACTC  | ACAGACCTGG | GCCAAAACCT | TCTCTACGCC  |
|       | AATACAGGTA | CCCGCGTGAG  | TGTCTGGACC | CGGTTTTGGA | AGAGATGCGG  |
| 21051 | AACTCCGCCC | ACGCGCTAGA  | CATGACTTTT | GAGGTGGATC | CCATGGACGA  |
|       | TTGAGGCGGG | TGCGCGATCT  | GTACTGAAAA | CTCCACCTAG | GGTACCTGCT  |
| 21101 | GCCCACCCTT | CTTTATGTTT  | TGTTTGAAGT | CTTTGACGTG | GTCCGTGTGC  |
|       | CGGGTGGGAA | GAAATACAAA  | ACAAACTTCA | GAAACTGCAC | CAGGCACACG  |
| 21151 | ACCAGCCGCA | CCGCGGCGTC  | ATCGAAACCG | TGTACCTGCG | CACGCCCTTC  |
|       | TGGTCGGCGT | GGCGCCGCAG  | TAGCTTTGGC | ACATGGACGC | GTGCGGGAAG  |
| 21201 | TCGGCCGGCA | ACGCCACAAC  | ATAAAGAAGC | AAGCAACATC | AACAACAGCT  |
|       | AGCCGGCCGT | TGCGGTGTTG  | TATTTCTTCG | TTCGTTGTAG | TTGTTGTCTGA |
| 21251 | GCCGCCATGG | GCTCCAGTGA  | GCAGGAACTG | AAAGCCATTG | TCAAAGATCT  |
|       | CGGCGGTACC | CGAGGTCACT  | CGTCCTTGAC | TTTCGGTAAC | AGTTTCTAGA  |
| 21301 | TGGTTGTGGG | CCATATTTTT  | TGGGCACCTA | TGACAAGCGC | TTTCCAGGCT  |
|       | ACCAACACCC | GGTATAAAAA  | ACCCGTGGAT | ACTGTTTCGC | AAAGGTCCGA  |
| 21351 | TTGTTTCTCC | ACACAAGCTC  | GCCTGCGCCA | TAGTCAATAC | GGCCGGTCGC  |
|       | AACAAAGAGG | TGTGTTCGAG  | CGGACGCGGT | ATCAGTTATG | CCGGCCAGCG  |
| 21401 | GAGACTGGGG | GCGTACACTG  | GATGGCCTTT | GCCTGGAACC | CGCACTCAAA  |
|       | CTCTGACCCC | CGCATGTGAC  | CTACCGGAAA | CGGACCTTGG | GCGTGAGTTT  |
| 21451 | AACATGCTAC | CTCTTTGAGC  | CCTTTGGCTT | TTCTGACCAG | CGACTCAAGC  |
|       | TTGTACGATG | GAGAAACTCG  | GGAAACCGAA | AAGACTGGTC | GCTGAGTTTCG |
| 21501 | AGGTTTACCA | GTTTGAGTAC  | GAGTCACTCC | TGCGCCGTAG | CGCCATTGCT  |
|       | TCCAAATGGT | CAAACATCATG | CTCAGTGAGG | ACGCGGCATC | GCGGTAACGA  |
| 21551 | TCTTCCCCCG | ACCGCTGTAT  | AACGCTGGAA | AAGTCCACCC | AAAGCGTACA  |
|       | AGAAGGGGGC | TGGCGACATA  | TTGCGACCTT | TTCAGGTGGG | TTTCGCATGT  |

FIG. 16A-27



|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 21601 | GGGGCCCAAC<br>CCCCGGGTTG | TCGGCCGCCT<br>AGCCGGCGGA | GTGGACTATT<br>CACCTGATAA | CTGCTGCATG<br>GACGACGTAC | TTTCTCCACG<br>AAAGAGGTGC |
| 21651 | CCTTTGCCAA<br>GGAAACGGTT | CTGGCCCCAA<br>GACCGGGGTT | ACTCCCATGG<br>TGAGGGTACC | ATCACAACCC<br>TAGTGTTGGG | CACCATGAAC<br>GTGGTACTTG |
| 21701 | CTTATTACCG<br>GAATAATGGC | GGGTACCCAA<br>CCCATGGGTT | CTCCATGCTC<br>GAGGTACGAG | AACAGTCCCC<br>TTGTCAGGGG | AGGTACAGCC<br>TCCATGTCGG |
| 21751 | CACCCTGCGT<br>GTGGGACGCA | CGCAACCAGG<br>GCGTTGGTCC | AACAGCTCTA<br>TTGTCGAGAT | CAGCTTCCTG<br>GTCGAAGGAC | GAGCGCCACT<br>CTCGCGGTGA |
| 21801 | CGCCCTACTT<br>GCGGGATGAA | CCGCAGCCAC<br>GGCGTCGGTG | AGTGCGCAGA<br>TCACGCGTCT | TTAGGAGCGC<br>AATCCTCGCG | CACTTCTTTT<br>GTGAAGAAAA |
| 21851 | TGTCACTTGA<br>ACAGTGAAC  | AAAACATGTA<br>TTTTGTACAT | AAAATAATGT<br>TTTTATTACA | ACTAGAGACA<br>TGATCTCTGT | CTTTCATAAA<br>GAAAGTTATT |
| 21901 | AGGCAAATGC<br>TCCGTTTACG | TTTTATTTGT<br>AAAATAAACA | ACACTCTCGG<br>TGTGAGAGCC | GTGATTATTT<br>CACTAATAAA | ACCCCCACCC<br>TGGGGGTGGG |
| 21951 | TTGCCGTCTG<br>AACGGCAGAC | CGCCGTTTAA<br>GCGGCAAATT | AAATCAAAGG<br>TTTAGTTTCC | GGTTCTGCCG<br>CCAAGACGGC | CGCATCGCTA<br>GCGTAGCGAT |
| 22001 | TGCGCCACTG<br>ACGCGGTGAC | GCAGGGACAC<br>CGTCCCTGTG | GTTGCGATAC<br>CAACGCTATG | TGGTGTTTAG<br>ACCACAAATC | TGCTCCACTT<br>ACGAGGTGAA |
| 22051 | AAACTCAGGC<br>TTTGAGTCCG | ACAACCATCC<br>TGTTGGTAGG | GCGGCAGCTC<br>CGCCGTCGAG | GGTGAAGTTT<br>CCACTTCAAA | TCACTCCACA<br>AGTGAGGTGT |
| 22101 | GGCTGCGCAC<br>CCGACGCGTG | CATCACCAAC<br>GTAGTGGTTG | GCGTTTAGCA<br>CGCAAATCGT | GGTCGGGCGC<br>CCAGCCCGCG | CGATATCTTG<br>GCTATAGAAC |
| 22151 | AAGTCGCAGT<br>TTCAGCGTCA | TGGGGCCTCC<br>ACCCCGGAGG | GCCCTGCGCG<br>CGGGACGCGC | CGCGAGTTGC<br>GCGCTCAACG | GATACACAGG<br>CTATGTGTCC |
| 22201 | GTTGCAGCAC<br>CAACGTCGTG | TGGAACACTA<br>ACCTTGTGAT | TCAGCGCCGG<br>AGTCGCGGCC | GTGGTGCACG<br>CACCACGTGC | CTGGCCAGCA<br>GACCGGTCGT |
| 22251 | CGCTCTTGTC<br>GCGAGAACAG | GGAGATCAGA<br>CCTCTAGTCT | TCCGCGTCCA<br>AGGCGCAGGT | GGTCCTCCGC<br>CCAGGAGGCG | GTTGCTCAGG<br>CAACGAGTCC |
| 22301 | GCGAACGGAG<br>CGCTTGCCTC | TCAACTTTGG<br>AGTTGAAACC | TAGCTGCCTT<br>ATCGACGGAA | CCCAAAAAGG<br>GGGTTTTTCC | GCGCGTGCCC<br>CGCGCACGGG |
| 22351 | AGGCTTTGAG<br>TCCGAAACTC | TTGCACTCGC<br>AACGTGAGCG | ACCGTAGTGG<br>TGGCATCACC | CATCAAAAGG<br>GTAGTTTTCC | TGACCGTGCC<br>ACTGGCACGG |

FIG. 16A-28

|       |            |             |            |            |             |
|-------|------------|-------------|------------|------------|-------------|
| 22401 | CGGTCTGGGC | GTTAGGATAC  | AGCGCCTGCA | TAAAAGCCTT | GATCTGCTTA  |
|       | GCCAGACCCG | CAATCCTATG  | TCGCGGACGT | ATTTTCGGAA | CTAGACGAAT  |
| 22451 | AAAGCCACCT | GAGCCTTTGC  | GCCTTCAGAG | AAGAACATGC | CGCAAGACTT  |
|       | TTTCGGTGGA | CTCGGAAACG  | CGGAAGTCTC | TTCTTGACG  | GCGTTCTGAA  |
| 22501 | GCCGGAAAAC | TGATTGGCCG  | GACAGGCCGC | GTCGTGCACG | CAGCACCTTG  |
|       | CGGCCTTTTG | ACTAACCGGC  | CTGTCCGGCG | CAGCACGTGC | GTCGTGGAAC  |
| 22551 | CGTCGGTGTT | GGAGATCTGC  | ACCACATTTT | GGCCCCACCG | GTTCTTCACG  |
|       | GCAGCCACAA | CCTCTAGACG  | TGGTGTAAG  | CCGGGGTGCG | CAAGAAGTGC  |
| 22601 | ATCTTGGCCT | TGCTAGACTG  | CTCCTTCAGC | GCGCGCTGCC | CGTTTTTCGCT |
|       | TAGAACCGGA | ACGATCTGAC  | GAGGAAGTCG | CGCGCGACGG | GCAAAAGCGA  |
| 22651 | CGTCACATCC | ATTTCAATCA  | CGTGCTCCTT | ATTTATCATA | ATGCTTCCGT  |
|       | GCAGTGTAGG | TAAAGTTAGT  | GCACGAGGAA | TAAATAGTAT | TACGAAGGCA  |
| 22701 | GTAGACACTT | AAGCTCGCCT  | TCGATCTCAG | CGCAGCGGTG | CAGCCACAAC  |
|       | CATCTGTGAA | TTTCGAGCGGA | AGCTAGAGTC | GCGTCGCCAC | GTCGGTGTTG  |
| 22751 | GCGCAGCCCG | TGGGCTCGTG  | ATGCTTGTAG | GTCACCTCTG | CAAACGACTG  |
|       | CGCGTCGGGC | ACCCGAGCAC  | TACGAACATC | CAGTGGAGAC | GTTTGCTGAC  |
| 22801 | CAGGTACGCC | TGCAGGAATC  | GCCCCATCAT | CGTCACAAAG | GTCTTGTTGC  |
|       | GTCCATGCGG | ACGTCCTTAG  | CGGGGTAGTA | GCAGTGTTTC | CAGAACAACG  |
| 22851 | TGGTGAAGGT | CAGCTGCAAC  | CCGCGGTGCT | CCTCGTTCAG | CCAGGTCTTG  |
|       | ACCACTTCCA | GTCGACGTTG  | GGCGCCACGA | GGAGCAAGTC | GGTCCAGAAC  |
| 22901 | CATACGGCCG | CCAGAGCTTC  | CACTTGGTCA | GGCAGTAGTT | TGAAGTTCGC  |
|       | GTATGCCGGC | GGTCTCGAAG  | GTGAACCAGT | CCGTCATCAA | ACTTCAAGCG  |
| 22951 | CTTTAGATCG | TTATCCACGT  | GGTACTTGTC | CATCAGCGCG | CGCGCAGCCT  |
|       | GAAATCTAGC | AATAGGTGCA  | CCATGAACAG | GTAGTCGCGC | GCGCGTCGGA  |
| 23001 | CCATGCCCTT | CTCCCACGCA  | GACACGATCG | GCACACTCAG | CGGGTTCATC  |
|       | GGTACGGGAA | GAGGGTGCGT  | CTGTGCTAGC | CGTGTGAGTC | GCCCAAGTAG  |
| 23051 | ACCGTAATTT | CACTTTCCGC  | TTGCTGGGCG | TCTTCCTCTT | CCTCTTGCGT  |
|       | TGGCATTAAA | GTGAAAGGCG  | AAGCGACCCG | AGAAGGAGAA | GGAGAACGCA  |
| 23101 | CCGCATACCA | CGCGCCACTG  | GGTCGTCTTC | ATTCAGCCGC | CGCACTGTGC  |
|       | GGCGTATGGT | GCGCGGTGAC  | CCAGCAGAAG | TAAGTCGGCG | GCGTGACACG  |
| 23151 | GCTTACCTCC | TTTGCCATGC  | TTGATTAGCA | CCGGTGGGTT | GCTGAAACCC  |
|       | CGAATGGAGG | AAACGGTACG  | AACTAATCGT | GGCCACCCAA | CGACTTTGGG  |

FIG. 16A-29

|       |                           |                           |                           |                          |                           |
|-------|---------------------------|---------------------------|---------------------------|--------------------------|---------------------------|
| 23201 | ACCATTTGTA<br>TGGTAAACAT  | GCGCCACATC<br>CGCGGTGTAG  | TTCTCTTTCT<br>AAGAGAAAGA  | TCCTCGCTGT<br>AGGAGCGACA | CCACGATTAC<br>GGTGCTAATG  |
| 23251 | CTCTGGTGAT<br>GAGACCACTA  | GGCGGGCGCT<br>CCGCCCCGCGA | CGGGCTTGGG<br>GCCCCGAACCC | AGAAGGGCGC<br>TCTTCCCGCG | TTCTTTTTTCT<br>AAGAAAAAGA |
| 23301 | TCTTGGGCGC<br>AGAACCCGCG  | AATGGCCAAA<br>TTACCGGTTT  | TCCGCCGCCG<br>AGGCGGCGGC  | AGGTCGATGG<br>TCCAGCTACC | CCGCGGGCTG<br>GGCGCCCGAC  |
| 23351 | GGTGTGCGCG<br>CCACACGCGC  | GCACCAGCGC<br>CGTGGTCGCG  | GTCTTG TGAT<br>CAGAACACTA | GAGTCTTCCT<br>CTCAGAAGGA | CGTCCTCGGA<br>GCAGGAGCCT  |
| 23401 | CTCGATACGC<br>GAGCTATGCG  | CGCCTCATCC<br>GCGGAGTAGG  | GCTTTTTTTGG<br>CGAAAAAACC | GGGCGCCCGG<br>CCCGCGGGCC | GGAGGCGGCG<br>CCTCCGCCGC  |
| 23451 | GCGACGGGGA<br>CGCTGCCCCCT | CGGGGACGAC<br>GCCCCCTGCTG | ACGTCCTCCA<br>TGCAGGAGGT  | TGGTTGGGGG<br>ACCAACCCCC | ACGTCGCGCC<br>TGCAGCGCGG  |
| 23501 | GCACCGCGTC<br>CGTGGCGCAG  | CGCGCTCGGG<br>GCGCGAGCCC  | GGTGGTTTCG<br>CCACCAAAGC  | CGCTGCTCCT<br>GCGACGAGGA | CTTCCCGACT<br>GAAGGGCTGA  |
| 23551 | GGCCATTTCC<br>CCGGTAAAGG  | TTCTCCTATA<br>AAGAGGATAT  | GGCAGAAAAA<br>CCGTCTTTTT  | GATCATGGAG<br>CTAGTACCTC | TCAGTCGAGA<br>AGTCAGCTCT  |
| 23601 | AGAAGGACAG<br>TCTTCCTGTC  | CCTAACCGCC<br>GGATTGGCGG  | CCCTCTGAGT<br>GGGAGACTCA  | TCGCCACCAC<br>AGCGGTGGTG | CGCCTCCACC<br>GCGGAGGTGG  |
| 23651 | GATGCCGCCA<br>CTACGGCGGT  | ACGCGCCTAC<br>TGCGCGGATG  | CACCTTCCCC<br>GTGGAAGGGG  | GTCGAGGCAC<br>CAGCTCCGTG | CCCCGCTTGA<br>GGGGCGAACT  |
| 23701 | GGAGGAGGAA<br>CCTCCTCCTT  | GTGATTATCG<br>CACTAATAGC  | AGCAGGACCC<br>TCGTCCTGGG  | AGGTTTTGTA<br>TCCAAAACAT | AGCGAAGACG<br>TCGCTTCTGC  |
| 23751 | ACGAGGACCG<br>TGCTCCTGGC  | CTCAGTACCA<br>GAGTCATGGT  | ACAGAGGATA<br>TGTCTCCTAT  | AAAAGCAAGA<br>TTTTCGTTCT | CCAGGACAAC<br>GGTCCTGTTG  |
| 23801 | GCAGAGGCAA<br>CGTCTCCGTT  | ACGAGGAACA<br>TGCTCCTTGT  | AGTCGGGCGG<br>TCAGCCCGCC  | GGGGACGAAA<br>CCCCTGCTTT | GGCATGGCGA<br>CCGTACCGCT  |
| 23851 | CTACCTAGAT<br>GATGGATCTA  | GTGGGAGACG<br>CACCTCTGCG  | ACGTGCTGTT<br>TGCACGACAA  | GAAGCATCTG<br>CTTCGTAGAC | CAGCGCCAGT<br>GTCGCGGTCA  |
| 23901 | GCGCCATTAT<br>CGCGGTAATA  | CTGCGACGCG<br>GACGCTGCGC  | TTGCAAGAGC<br>AACGTTCTCG  | GCAGCGATGT<br>CGTCGCTACA | GCCCCTCGCC<br>CGGGGAGCGG  |
| 23951 | ATAGCGGATG<br>TATCGCCTAC  | TCAGCCTTGC<br>AGTCGGAACG  | CTACGAACGC<br>GATGCTTGCG  | CACCTATTCT<br>GTGGATAAGA | CACCGCGCGT<br>GTGGCGCGCA  |

FIG. 16A-30

|       |            |            |             |            |            |
|-------|------------|------------|-------------|------------|------------|
| 24001 | ACCCCCCAA  | CGCCAAGAA  | ACGGCACATG  | CGAGCCCAAC | CCGCGCCTCA |
|       | TGGGGGGTTT | GCGGTTCTTT | TGCCGTGTAC  | GCTCGGGTTG | GGCGCGGAGT |
| 24051 | ACTTCTACCC | CGTATTTGCC | GTGCCAGAGG  | TGCTTGCCAC | CTATCACATC |
|       | TGAAGATGGG | GCATAAACGG | CACGGTCTCC  | ACGAACGGTG | GATAGTGTAG |
| 24101 | TTTTTCCAAA | ACTGCAAGAT | ACCCCTATCC  | TGCCGTGCCA | ACCGCAGCCG |
|       | AAAAAGGTTT | TGACGTTCTA | TGGGGATAGG  | ACGGCACGGT | TGGCGTCGGC |
| 24151 | AGCGGACAAG | CAGCTGGCCT | TGCGGCAGGG  | CGCTGTCATA | CCTGATATCG |
|       | TCGCCTGTTC | GTCGACCGGA | ACGCCGTCCC  | GCGACAGTAT | GGACTATAGC |
| 24201 | CCTCGCTCAA | CGAAGTGCCA | AAAATCTTTG  | AGGGTCTTGG | ACGCGACGAG |
|       | GGAGCGAGTT | GCTTCACGGT | TTTTAGAAAC  | TCCCAGAACC | TGCGCTGCTC |
| 24251 | AAGCGCGCGG | CAAACGCTCT | GCAACAGGAA  | AACAGCGAAA | ATGAAAGTCA |
|       | TTGCGCGGCC | GTTTGCGAGA | CGTTGTCCTT  | TTGTCGCTTT | TACTTTCAGT |
| 24301 | CTCTGGAGTG | TTGGTGGAAC | TCGAGGGTGA  | CAACGCGCGC | CTAGCCGTAC |
|       | GAGACCTCAC | AACCACCTTG | AGCTCCCCT   | GTTGCGCGCG | GATCGGCATG |
| 24351 | TAAAACGCAG | CATCGAGGTC | ACCCACTTTG  | CCTACCCGGC | ACTTAACCTA |
|       | ATTTTGCGTC | GTAGCTCCAG | TGGGTGAAAC  | GGATGGGCCG | TGAATTGGAT |
| 24401 | CCCCCAAGG  | TCATGAGCAC | AGTCATGAGT  | GAGCTGATCG | TGCGCCGTGC |
|       | GGGGGGTTCC | AGTACTCGTG | TCAGTACTCA  | CTCGACTAGC | ACGCGGCACG |
| 24451 | GCAGCCCCTG | GAGAGGGATG | CAAATTTGCA  | AGAACAACA  | GAGGAGGGCC |
|       | CGTCGGGGAC | CTCTCCCTAC | GTTTAAACGT  | TCTTGTTTGT | CTCCTCCCGG |
| 24501 | TACCCGCAGT | TGGCGACGAG | CAGCTAGCGC  | GCTGGCTTCA | AACGCGCGAG |
|       | ATGGGCGTCA | ACCGCTGCTC | GTCGATCGCG  | CGACCGAAGT | TTGCGCGCTC |
| 24551 | CCTGCCGACT | TGGAGGAGCG | ACGCAAACCTA | ATGATGGCCG | CAGTGCTCGT |
|       | GGACGGCTGA | ACCTCCTCGC | TGCGTTTGAT  | TACTACCGGC | GTCACGAGCA |
| 24601 | TACCGTGGAG | CTTGAGTGCA | TGCAGCGGTT  | CTTTGCTGAC | CCGGAGATGC |
|       | ATGGCACCTC | GAACTCACGT | ACGTCGCCAA  | GAAACGACTG | GGCCTCTACG |
| 24651 | AGCGCAAGCT | AGAGGAAACA | TTGCACTACA  | CCTTTCGACA | GGGCTACGTA |
|       | TCGCGTTCGA | TCTCCTTTGT | AACGTGATGT  | GGAAAGCTGT | CCCGATGCAT |
| 24701 | CGCCAGGCCT | GCAAGATCTC | CAACGTGGAG  | CTCTGCAACC | TGGTCTCCTA |
|       | GCGGTCCGGA | CGTTCTAGAG | GTTGCACCTC  | GAGACGTTGG | ACCAGAGGAT |
| 24751 | CCTTGGAATT | TTGCACGAAA | ACCGCCTTGG  | GCAAAACGTG | CTTCATTCCA |
|       | GGAACCTTAA | AACGTGCTTT | TGGCGGAACC  | CGTTTTGCAC | GAAGTAAGGT |

FIG. 16A-31



|       |                          |                          |                           |                          |                           |
|-------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| 24801 | CGCTCAAGGG<br>GCGAGTTCCC | CGAGGCGCGC<br>GCTCCGCGCG | CGCGACTACG<br>GCGCTGATGC  | TCCGCGACTG<br>AGGCGCTGAC | CGTTTACTTA<br>GCAAATGAAT  |
| 24851 | TTTCTATGCT<br>AAAGATACGA | ACACCTGGCA<br>TGTGGACCGT | GACGGCCATG<br>CTGCCGGTAC  | GGCGTTTGGC<br>CCGCAAACCG | AGCAGTGCTT<br>TCGTCACGAA  |
| 24901 | GGAGGAGTGC<br>CCTCCTCACG | AACCTCAAGG<br>TTGGAGTTCC | AGCTGCAGAA<br>TCGACGTCTT  | ACTGCTAAAG<br>TGACGATTTC | CAAAACTTGA<br>GTTTTGAACT  |
| 24951 | AGGACCTATG<br>TCCTGGATAC | GACGGCCTTC<br>CTGCCGGAAG | AACGAGCGCT<br>TTGCTCGCGA  | CCGTGGCCGC<br>GGCACCGGCG | GCACCTGGCG<br>CGTGGACCGC  |
| 25001 | GACATCATTT<br>CTGTAGTAAA | TCCCCGAACG<br>AGGGGCTTGC | CCTGCTTAAA<br>GGACGAATTT  | ACCCTGCAAC<br>TGGGACGTTG | AGGGTCTGCC<br>TCCCAGACGG  |
| 25051 | AGACTTCACC<br>TCTGAAGTGG | AGTCAAAGCA<br>TCAGTTTCGT | TGTTGCAGAA<br>ACAACGTCTT  | CTTTAGGAAC<br>GAAATCCTTG | TTTATCCTAG<br>AAATAGGATC  |
| 25101 | AGCGCTCAGG<br>TCGCGAGTCC | AATCTTGCCC<br>TTAGAACGGG | GCCACCTGCT<br>CGGTGGACGA  | GTGCACTTCC<br>CACGTGAAGG | TAGCGACTTT<br>ATCGCTGAAA  |
| 25151 | GTGCCCATTA<br>CACGGGTAAT | AGTACCGCGA<br>TCATGGCGCT | ATGCCCTCCG<br>TACGGGAGGC  | CCGCTTTGGG<br>GGCGAAACCC | GCCACTGCTA<br>CGGTGACGAT  |
| 25201 | CCTTCTGCAG<br>GGAAGACGTC | CTAGCCAACT<br>GATCGGTTGA | ACCTTGCCCTA<br>TGGAACGGAT | CCACTCTGAC<br>GGTGAGACTG | ATAATGGAAG<br>TATTACCTTC  |
| 25251 | ACGTGAGCGG<br>TGCACTCGCC | TGACGGTCTA<br>ACTGCCAGAT | CTGGAGTGTC<br>GACCTCACAG  | ACTGTCGCTG<br>TGACAGCGAC | CAACCTATGC<br>GTTGGATACG  |
| 25301 | ACCCCGCACC<br>TGGGGCGTGG | GCTCCCTGGT<br>CGAGGGACCA | TTGCAATTCTG<br>AACGTTAAGC | CAGCTGCTTA<br>GTCGACGAAT | ACGAAAGTCA<br>TGCTTTCAGT  |
| 25351 | AATTATCGGT<br>TTAATAGCCA | ACCTTTGAGC<br>TGGAAACTCG | TGCAGGGTCC<br>ACGTCCCAGG  | CTCGCCTGAC<br>GAGCGGACTG | GAAAAGTCCG<br>CTTTTCAGGC  |
| 25401 | CGGCTCCGGG<br>GCCGAGGCC  | GTTGAAACTC<br>CAACTTTGAG | ACTCCGGGGC<br>TGAGGCCCCG  | TGTGGACGTC<br>ACACCTGCAG | GGCTTACCTT<br>CCGAATGGAA  |
| 25451 | CGCAAATTTG<br>GCGTTTAAAC | TACCTGAGGA<br>ATGGACTCCT | CTACCACGCC<br>GATGGTGCGG  | CACGAGATTA<br>GTGCTCTAAT | GGTTCTACGA<br>CCAAGATGCT  |
| 25501 | AGACCAATCC<br>TCTGGTTAGG | CGCCCGCCTA<br>GCGGGCGGAT | ATGCGGAGCT<br>TACGCCTCGA  | TACCGCCTGC<br>ATGGCGGACG | GTCATTACCC<br>CAGTAATGGG  |
| 25551 | AGGGCCACAT<br>TCCCGGTGTA | TCTTGGCCAA<br>AGAACCGGTT | TTGCAAGCCA<br>AACGTTCTGGT | TCAACAAAGC<br>AGTTGTTTCG | CCGCCAAGAG<br>GGCGGTTCCTC |

FIG. 16A-32

|       |                          |                           |                           |                          |                          |
|-------|--------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| 25601 | TTTCTGCTAC<br>AAAGACGATG | GAAAGGGACG<br>CTTTCCCTGC  | GGGGGTTTAC<br>CCCCCAAATG  | TTGGACCCCC<br>AACCTGGGGG | AGTCCGGCGA<br>TCAGGCCGCT |
| 25651 | GGAGCTCAAC<br>CCTCGAGTTG | CCAATCCCCC<br>GGTTAGGGGG  | CGCCGCCGCA<br>GCGGCGGCGT  | GCCCTATCAG<br>CGGGATAGTC | CAGCAGCCGC<br>GTCGTCGGCG |
| 25701 | GGGCCCTTGC<br>CCCGGGAACG | TTCCCAGGAT<br>AAGGGTCCTA  | GGCACCCAAA<br>CCGTGGGTTT  | AAGAAGCTGC<br>TTCTTCGACG | AGCTGCCGCC<br>TCGACGGCGG |
| 25751 | GCCACCCACG<br>CGGTGGGTGC | GACGAGGAGG<br>CTGCTCCTCC  | AATACTGGGA<br>TTATGACCCT  | CAGTCAGGCA<br>GTCAGTCCGT | GAGGAGGTTT<br>CTCCTCCAAA |
| 25801 | TGGACGAGGA<br>ACCTGCTCCT | GGAGGAGGAC<br>CCTCCTCCTG  | ATGATGGAAG<br>TACTACCTTC  | ACTGGGAGAG<br>TGACCCTCTC | CCTAGACGAG<br>GGATCTGCTC |
| 25851 | GAAGCTTCCG<br>CTTCGAAGGC | AGGTCGAAGA<br>TCCAGCTTCT  | GGTGTCTAGAC<br>CCACAGTCTG | GAAACACCGT<br>CTTTGTGGCA | CACCCTCGGT<br>GTGGGAGCCA |
| 25901 | CGCATTCCCC<br>GCGTAAGGGG | TCGCCGGCGC<br>AGCGGCCGCG  | CCCAGAAATC<br>GGGTCTTTAG  | GGCAACCGGT<br>CCGTTGGCCA | TCCAGCATGG<br>AGGTCGTACC |
| 25951 | CTACAACCTC<br>GATGTTGGAG | CGCTCCTCAG<br>GCGAGGAGTC  | GCGCCGCCGG<br>CGCGGCGGCC  | CACTGCCCGT<br>GTGACGGGCA | TCGCCGACCC<br>AGCGGCTGGG |
| 26001 | AACCGTAGAT<br>TTGGCATCTA | GGGACACCAC<br>CCCTGTGGTG  | TGGAACCAGG<br>ACCTTGGTCC  | GCCGGTAAGT<br>CGGCCATTCA | CCAAGCAGCC<br>GGTTCGTCGG |
| 26051 | GCCGCCGTTA<br>CGGCGGCAAT | GCCCAAGAGC<br>CGGGTTCTCG  | AACAACAGCG<br>TTGTTGTCGC  | CCAAGGCTAC<br>GGTTCCGATG | CGCTCATGGC<br>GCGAGTACCG |
| 26101 | GCGGGCACAA<br>CGCCCGTGTT | GAACGCCATA<br>CTTGCGGTAT  | GTTGCTTGCT<br>CAACGAACGA  | TGCAAGACTG<br>ACGTTCTGAC | TGGGGGCAAC<br>ACCCCCGTTG |
| 26151 | ATCTCCTTCG<br>TAGAGGAAGC | CCCGCCGCTT<br>GGGCGGCGAA  | TCTTCTCTAC<br>AGAAGAGATG  | CATCACGGCG<br>GTAGTGCCGC | TGGCCTTCCC<br>ACCGGAAGGG |
| 26201 | CCGTAACATC<br>GGCATTTAG  | CTGCATTACT<br>GACGTAATGA  | ACCGTCATCT<br>TGGCAGTAGA  | CTACAGCCCA<br>GATGTCGGGT | TACTGCACCG<br>ATGACGTGGC |
| 26251 | GCGGCAGCGG<br>CGCCGTCGCC | CAGCAACAGC<br>GTCGTTGTCTG | AGCGGCCACA<br>TCGCCGGTGT  | CAGAAGCAAA<br>GTCTTCGTTT | GGCGACCGGA<br>CCGCTGGCCT |
| 26301 | TAGCAAGACT<br>ATCGTTCTGA | CTGACAAAGC<br>GACTGTTTCG  | CCAAGAAATC<br>GGTTCCTTAG  | CACAGCGGCG<br>GTGTCGCCGC | GCAGCAGCAG<br>CGTCGTCGTC |
| 26351 | GAGGAGGAGC<br>CTCCTCCTCG | GCTGCGTCTG<br>CGACGCAGAC  | GCGCCCAACG<br>CGCGGGTTGC  | AACCCGTATC<br>TTGGGCATAG | GACCCGCGAG<br>CTGGGCGCTC |

FIG. 16A-33

|       |                          |                          |                          |                          |                           |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 26401 | CTTAGAAACA<br>GAATCTTTGT | GGATTTTTCC<br>CCTAAAAAGG | CACTCTGTAT<br>GTGAGACATA | GCTATATTTC<br>CGATATAAAG | AACAGAGCAG<br>TTGTCTCGTC  |
| 26451 | GGGCAAGAA<br>CCCGGTTCTT  | CAAGAGCTGA<br>GTTCTCGACT | AAATAAAAAA<br>TTTATTTTTT | CAGGTCTCTG<br>GTCCAGAGAC | CGATCCCTCA<br>GCTAGGGAGT  |
| 26501 | CCCGCAGCTG<br>GGGCGTCGAC | CCTGTATCAC<br>GGACATAGTG | AAAAGCGAAG<br>TTTTCGCTTC | ATCAGCTTCG<br>TAGTCGAAGC | GCGCACGCTG<br>CGCGTGCGAC  |
| 26551 | GAAGACGCGG<br>CTTCTGCGCC | AGGCTCTCTT<br>TCCGAGAGAA | CAGTAAATAC<br>GTCATTTATG | TGCGCGCTGA<br>ACGCGCGACT | CTCTTAAGGA<br>GAGAATTCCT  |
| 26601 | CTAGTTTCGC<br>GATCAAAGCG | GCCCTTTCTC<br>CGGGAAAGAG | AAATTTAAGC<br>TTTAAATTCG | GCGAAACTA<br>CGCTTTTGAT  | CGTCATCTCC<br>GCAGTAGAGG  |
| 26651 | AGCGGCCACA<br>TCGCCGGTGT | CCCGGCGCCA<br>GGGCCGCGGT | GCACCTGTTG<br>CGTGGACAAC | TCAGCGCCAT<br>AGTCGCGGTA | TATGAGCAAG<br>ATACTCGTTC  |
| 26701 | GAAATTCCCA<br>CTTTAAGGGT | CGCCCTACAT<br>GCGGGATGTA | GTGGAGTTAC<br>CACCTCAATG | CAGCCACAAA<br>GTCGGTGTTT | TGGGACTTGC<br>ACCCTGAACG  |
| 26751 | GGCTGGAGCT<br>CCGACCTCGA | GCCCAAGACT<br>CGGGTTCTGA | ACTCAACCCG<br>TGAGTTGGGC | AATAAACTAC<br>TTATTTGATG | ATGAGCGCGG<br>TACTCGCGCC  |
| 26801 | GACCCACAT<br>CTGGGGTGTA  | GATATCCCGG<br>CTATAGGGCC | GTCAACGGAA<br>CAGTTGCCTT | TACGCGCCCA<br>ATGCGCGGGT | CCGAAACCGA<br>GGCTTTGGCT  |
| 26851 | ATTCTCCTGG<br>TAAGAGGACC | AACAGGCGGC<br>TTGTCCGCCG | TATTACCACC<br>ATAATGGTGG | ACACCTCGTA<br>TGTGGAGCAT | ATAACCTTAA<br>TATTGGAATT  |
| 26901 | TCCCCGTAGT<br>AGGGGCATCA | TGGCCCGCTG<br>ACCGGGCGAC | CCCTGGTGTA<br>GGGACCACAT | CCAGGAAAGT<br>GGTCCTTTCA | CCCGCTCCCA<br>GGGCGAGGGT  |
| 26951 | CCACTGTGGT<br>GGTGACACCA | ACTTCCCAGA<br>TGAAGGGTCT | GACGCCCAGG<br>CTGCGGGTCC | CCGAAGTTCA<br>GGCTTCAAGT | GATGACTAAC<br>CTACTGATTG  |
| 27001 | TCAGGGGCGC<br>AGTCCCCGCG | AGCTTGCGGG<br>TCGAACGCC  | CGGCTTTCGT<br>GCCGAAAGCA | CACAGGGTGC<br>GTGTCCCACG | GGTCGCCCCG<br>CCAGCGGGCC  |
| 27051 | GCAGGGTATA<br>CGTCCCATAT | ACTCACCTGA<br>TGAGTGGACT | CAATCAGAGG<br>GTTAGTCTCC | GCGAGGTATT<br>CGCTCCATAA | CAGCTCAACG<br>GTCGAGTTGC  |
| 27101 | ACGAGTCGGT<br>TGCTCAGCCA | GAGCTCCTCG<br>CTCGAGGAGC | CTTGGTCTCC<br>GAACCAGAGG | GTCCGGACGG<br>CAGGCCTGCC | GACATTTTCAG<br>CTGTAAAGTC |
| 27151 | ATCGGCGGCG<br>TAGCCGCCGC | CCGGCCGCTC<br>GGCCGGCGAG | TTCATTACAG<br>AAGTAAGTGC | CCTCGTCAGG<br>GGAGCAGTCC | CAATCCTAAC<br>GTTAGGATTG  |

FIG. 16A-34

|       |                          |                           |                          |                           |                           |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 27201 | TCTGCAGACC<br>AGACGTCTGG | TCGTCCTCTG<br>AGCAGGAGAC  | AGCCGCGCTC<br>TCGGCGCGAG | TGGAGGCATT<br>ACCTCCGTAA  | GGA ACTCTGC<br>CCTTGAGACG |
| 27251 | AATTTATTGA<br>TTAAATAACT | GGAGTTTGTG<br>CCTCAAACAC  | CCATCGGTCT<br>GGTAGCCAGA | ACTTTAACCC<br>TGAAATTGGG  | CTTCTCGGGA<br>GAAGAGCCCT  |
| 27301 | CCTCCCGGCC<br>GGAGGGCCGG | ACTATCCGGA<br>TGATAGGCCT  | TCAATTTATT<br>AGTTAAATAA | CCTAACTTTG<br>GGATTGAAAC  | ACGCGGTAAA<br>TGCGCCATTT  |
| 27351 | GGACTCGGCG<br>CCTGAGCCGC | GACGGCTACG<br>CTGCCGATGC  | ACTGAATGTT<br>TGACTTACAA | AAGTGGAGAG<br>TTCACCTCTC  | GCAGAGCAAC<br>CGTCTCGTTG  |
| 27401 | TGCGCCTGAA<br>ACGCGGACTT | ACACCTGGTC<br>TGTGGACCAG  | CACTGTCGCC<br>GTGACAGCGG | GCCACAAGTG<br>CGGTGTTTAC  | CTTTGCCCGC<br>GAAACGGGCG  |
| 27451 | GACTCCGGTG<br>CTGAGGCCAC | AGTTTTGCTA<br>TCAAAACGAT  | CTTTGAATTG<br>GAAACTTAAC | CCCGAGGATC<br>GGGCTCCTAG  | ATATCGAGGG<br>TATAGCTCCC  |
| 27501 | CCCGGCGCAC<br>GGGCCGCGTG | GGCGTCCGGC<br>CCGCAGGCCG  | TTACCGCCCA<br>AATGGCGGGT | GGGAGAGCTT<br>CCCTCTCGAA  | GCCCGTAGCC<br>CGGGCATCGG  |
| 27551 | TGATTCGGGA<br>ACTAAGCCCT | GTTTACCCAG<br>CAAATGGGTC  | CGCCCCCTGC<br>GCGGGGGACG | TAGTTGAGCG<br>ATCAACTCGC  | GGACAGGGGA<br>CCTGTCCCCT  |
| 27601 | CCCTGTGTTC<br>GGGACACAAG | TCACTGTGAT<br>AGTGACACTA  | TTGCAACTGT<br>AACGTTGACA | CCTAACCCTG<br>GGATTGGGAC  | GATTACATCA<br>CTAATGTAGT  |
| 27651 | AGATCTTTGT<br>TCTAGAAACA | TGCCATCTCT<br>ACGGTAGAGA  | GTGCTGAGTA<br>CACGACTCAT | TAATAAATAC<br>ATTATTTATG  | AGAAATTAAA<br>TCTTTAATTT  |
| 27701 | ATATACTGGG<br>TATATGACCC | GCTCCTATCG<br>CGAGGATAGC  | CCATCCTGTA<br>GGTAGGACAT | AACGCCACCG<br>TTGCGGTGGC  | TCTTCACCCG<br>AGAAGTGGGC  |
| 27751 | CCCAAGCAAA<br>GGGTTCGTTT | CCAAGGCGAA<br>GGTTCCGCTT  | CCTTACCTGG<br>GGAATGGACC | TACTTTTAAAC<br>ATGAAAATTG | ATCTCTCCCT<br>TAGAGAGGGA  |
| 27801 | CTGTGATTTA<br>GACACTAAAT | CAACAGTTTC<br>GTTGTCAAAG  | AACCCAGACG<br>TTGGGTCTGC | GAGTGAGTCT<br>CTCACTCAGA  | ACGAGAGAAC<br>TGCTCTCTTG  |
| 27851 | CTCTCCGAGC<br>GAGAGGCTCG | TCAGCTACTC<br>AGTCGATGAG  | CATCAGAAAA<br>GTAGTCTTTT | AACACCACCC<br>TTGTGGTGGG  | TCCTTACCTG<br>AGGAATGGAC  |
| 27901 | CCGGGAACGT<br>GGCCCTTGCA | ACGAGTGCGT<br>TGCTCACGCA  | CACCGGCCGC<br>GTGGCCGGCG | TGCACCACAC<br>ACGTGGTGTG  | CTACCGCCTG<br>GATGGCGGAC  |
| 27951 | ACCGTAAACC<br>TGGCATTTGG | AGACTTTTTTC<br>TCTGAAAAAG | CGGACAGACC<br>GCCTGTCTGG | TCAATAACTC<br>AGTTATTGAG  | TGTTTACCAG<br>ACAAATGGTC  |

FIG. 16A-35

|       |                           |                          |                          |                          |                           |
|-------|---------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 28001 | AACAGGAGGT<br>TTGTCCTCCA  | GAGCTTAGAA<br>CTCGAATCTT | AACCCTTAGG<br>TTGGGAATCC | GTATTAGGCC<br>CATAATCCGG | AAAGGCGCAG<br>TTTCCGCGTC  |
| 28051 | CTACTGTGGG<br>GATGACACCC  | GTTTATGAAC<br>CAAATACTTG | AATTCAAGCA<br>TTAAGTTCGT | ACTCTACGGG<br>TGAGATGCCC | CTATTCTAAT<br>GATAAGATTA  |
| 28101 | TCAGGTTTCT<br>AGTCCAAAGA  | CTAGAATCGG<br>GATCTTAGCC | GGTTGGGGTT<br>CCAACCCCAA | ATTCTCTGTC<br>TAAGAGACAG | TTGTGATTCT<br>AACACTAAGA  |
| 28151 | CTTTATTCTT<br>GAAATAAGAA  | ATACTAACGC<br>TATGATTGCG | TTCTCTGCCT<br>AAGAGACGGA | AAGGCTCGCC<br>TTCCGAGCGG | GCCTGCTGTG<br>CGGACGACAC  |
| 28201 | TGCACATTTG<br>ACGTGTAAAC  | CATTTATTGT<br>GTAAATAACA | CAGCTTTTTA<br>GTCGAAAAT  | AACGCTGGGG<br>TTGCGACCCC | TCGCCACCCA<br>AGCGGTGGGT  |
| 28251 | AGATGATTAG<br>TCTACTAATC  | GTACATAATC<br>CATGTATTAG | CTAGGTTTAC<br>GATCCAAATG | TCACCCTTGC<br>AGTGGGAACG | GTCAGCCCAC<br>CAGTCGGGTG  |
| 28301 | GGTACCACCC<br>CCATGGTGGG  | AAAAGGTGGA<br>TTTTCCACCT | TTTTAAGGAG<br>AAAATTCCTC | CCAGCCTGTA<br>GGTCGGACAT | ATGTTACATT<br>TACAATGTAA  |
| 28351 | CGCAGCTGAA<br>GCGTCGACTT  | GCTAATGAGT<br>CGATTACTCA | GCACCACTCT<br>CGTGGTGAGA | TATAAAATGC<br>ATATTTTACG | ACCACAGAAC<br>TGGTGTCTTG  |
| 28401 | ATGAAAAGCT<br>TACTTTTCGA  | GCTTATTCGC<br>CGAATAAGCG | CACAAAAACA<br>GTGTTTTTGT | AAATTGGCAA<br>TTTAACCGTT | GTATGCTGTT<br>CATACGACAA  |
| 28451 | TATGCTATTT<br>ATACGATAAA  | GGCAGCCAGG<br>CCGTCGGTCC | TGACACTACA<br>ACTGTGATGT | GAGTATAATG<br>CTCATATTAC | TTACAGTTTT<br>AATGTCAAAA  |
| 28501 | CCAGGGTAAA<br>GGTCCCATTT  | AGTCATAAAA<br>TCAGTATTTT | CTTTTATGTA<br>GAAAATACAT | TACTTTTCCA<br>ATGAAAAGGT | TTTTATGAAA<br>AAAATACTTT  |
| 28551 | TGTGCGACAT<br>ACACGCTGTA  | TACCATGTAC<br>ATGGTACATG | ATGAGCAAAC<br>TACTCGTTTG | AGTATAAGTT<br>TCATATTCAA | GTGGCCCCCA<br>CACCGGGGGT  |
| 28601 | CAA AATTGTG<br>GTTTTAACAC | TGGAAAACAC<br>ACCTTTTGTG | TGGCACTTTC<br>ACCGTGAAAG | TGCTGCACTG<br>ACGACGTGAC | CTATGCTAAT<br>GATACGATTA  |
| 28651 | TACAGTGCTC<br>ATGTCACGAG  | GCTTTGGTCT<br>CGAAACCAGA | GTACCCTACT<br>CATGGGATGA | CTATATTAAA<br>GATATAATTT | TACAAAAGCA<br>ATGTTTTTCGT |
| 28701 | GACGCAGCTT<br>CTGCGTCGAA  | TATTGAGGAA<br>ATAACTCCTT | AAGAAAATGC<br>TTCTTTTACG | CTTAATTTAC<br>GAATTAAATG | TAAGTTACAA<br>ATTCAATGTT  |
| 28751 | AGCTAATGTC<br>TCGATTACAG  | ACCACTAACT<br>TGGTGATTGA | GCTTTACTCG<br>CGAAATGAGC | CTGCTTGCAA<br>GACGAACGTT | AACAAATTCA<br>TTGTTTAAGT  |

FIG. 16A-36



|       |                          |                          |                          |                          |                           |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| 28801 | AAAAGTTAGC<br>TTTTCAATCG | ATTATAATTA<br>TAATATTAAT | GAATAGGATT<br>CTTATCCTAA | TAAACCCCCC<br>ATTTGGGGGG | GGTCATTTCC<br>CCAGTAAAGG  |
| 28851 | TGCTCAATAC<br>ACGAGTTATG | CATTCCCCTG<br>GTAAGGGGAC | AACAATTGAC<br>TTGTTAACTG | TCTATGTGGG<br>AGATACACCC | ATATGCTCCA<br>TATACGAGGT  |
| 28901 | GCGCTACAAC<br>CGCGATGTTG | CTTGAAGTCA<br>GAACTTCAGT | GGCTTCCTGG<br>CCGAAGGACC | ATGTCAGCAT<br>TACAGTCGTA | CTGACTTTGG<br>GACTGAAACC  |
| 28951 | CCAGCACCTG<br>GGTCGTGGAC | TCCCGCGGAT<br>AGGGCGCCTA | TTGTTCCAGT<br>AACAAGGTCA | CCAACTACAG<br>GGTTGATGTC | CGACCCACCC<br>GCTGGGTGGG  |
| 29001 | TAACAGAGAT<br>ATTGTCTCTA | GACCAACACA<br>CTGGTTGTGT | ACCAACGCGG<br>TGGTTGCGCC | CCGCCGCTAC<br>GGCGGCGATG | CGGACTTACA<br>GCCTGAATGT  |
| 29051 | TCTACCACAA<br>AGATGGTGTT | ATACACCCCA<br>TATGTGGGGT | AGTTTCTGCC<br>TCAAAGACGG | TTTGTCAATA<br>AAACAGTTAT | ACTGGGATAA<br>TGACCCTATT  |
| 29101 | CTTGGGCATG<br>GAACCCGTAC | TGGTGGTTCT<br>ACCACCAAGA | CCATAGCGCT<br>GGTATCGCGA | TATGTTTGTA<br>ATACAAACAT | TGCCTTATTA<br>ACGGAATAAT  |
| 29151 | TTATGTGGCT<br>AATACACCGA | CATCTGCTGC<br>GTAGACGACG | CTAAAGCGCA<br>GATTTGCGGT | AACGCGCCCG<br>TTGCGCGGGC | ACCACCCATC<br>TGGTGGGTAG  |
| 29201 | TATAGTCCCA<br>ATATCAGGGT | TCATTGTGCT<br>AGTAACACGA | ACACCCAAAC<br>TGTGGGTTTG | AATGATGGAA<br>TTACTACCTT | TCCATAGATT<br>AGGTATCTAA  |
| 29251 | GGACGGACTG<br>CCTGCCTGAC | AAACACATGT<br>TTTGTGTACA | TCTTTTCTCT<br>AGAAAAGAGA | TACAGTATGA<br>ATGTCATACT | TTAAATGAGA<br>AATTTACTCT  |
| 29301 | CATGATTCCT<br>GTACTAAGGA | CGAGTTTTTA<br>GCTCAAAAAT | TATTACTGAC<br>ATAATGACTG | CCTTGTTGCG<br>GGAACAACGC | CTTTTTTTGTG<br>GAAAAAACAC |
| 29351 | CGTGCTCCAC<br>GCACGAGGTG | ATTGGCTGCG<br>TAACCGACGC | GTTTCTCACA<br>CAAAGAGTGT | TCGAAGTAGA<br>AGCTTCATCT | CTGCATTCCA<br>GACGTAAGGT  |
| 29401 | GCCTTCACAG<br>CGGAAGTGTC | TCTATTTGCT<br>AGATAAACGA | TTACGGATTT<br>AATGCCTAAA | GTCACCCTCA<br>CAGTGGGAGT | CGCTCATCTG<br>GCGAGTAGAC  |
| 29451 | CAGCCTCATC<br>GTCGGAGTAG | ACTGTGGTCA<br>TGACACCAGT | TCGCCTTTAT<br>AGCGGAAATA | CCAGTGCATT<br>GGTCACGTAA | GACTGGGTCT<br>CTGACCCAGA  |
| 29501 | GTGTGCGCTT<br>CACACGCGAA | TGCATATCTC<br>ACGTATAGAG | AGACACCATC<br>TCTGTGGTAG | CCCAGTACAG<br>GGGTCATGTC | GGACAGGACT<br>CCTGTCCTGA  |
| 29551 | ATAGCTGAGC<br>TATCGACTCG | TTCTTAGAAT<br>AAGAATCTTA | TCTTTAATTA<br>AGAAATTAAT | TGAAATTTAC<br>ACTTTAAATG | TGTGACTTTT<br>ACACTGAAAA  |

FIG. 16A-37

|       |            |             |             |             |             |
|-------|------------|-------------|-------------|-------------|-------------|
| 29601 | CTGCTGATTA | TTTGCACCCT  | ATCTGCGTTT  | TGTTCCCCGA  | CCTCCAAGCC  |
|       | GACGACTAAT | AAACGTGGGA  | TAGACGCAAA  | ACAAGGGGCT  | GGAGGTTTCGG |
| 29651 | TCAAAGACAT | ATATCATGCA  | GATTCACCTCG | TATATGGAAT  | ATTCCAAGTT  |
|       | AGTTTCTGTA | TATAGTACGT  | CTAAGTGAGC  | ATATACCTTA  | TAAGGTTCAA  |
| 29701 | GCTACAATGA | AAAAAGCGAT  | CTTTCCGAAG  | CCTGGTTATA  | TGCAATCATC  |
|       | CGATGTTACT | TTTTTTCGCTA | GAAAGGCTTC  | GGACCAATAT  | ACGTTAGTAG  |
| 29751 | TCTGTTATGG | TGTTCTGCAG  | TACCATCTTA  | GCCCTAGCTA  | TATATCCCTA  |
|       | AGACAATACC | ACAAGACGTC  | ATGGTAGAAT  | CGGGATCGAT  | ATATAGGGAT  |
| 29801 | CCTTGACATT | GGCTGGAACG  | CAATAGATGC  | CATGAACCAC  | CCAACTTTCC  |
|       | GGAACTGTAA | CCGACCTTGC  | GTTATCTACG  | GTACTTGGTG  | GGTTGAAAGG  |
| 29851 | CCGCGCCCGC | TATGCTTCCA  | CTGCAACAAG  | TTGTTGCCGG  | CGGCTTTGTC  |
|       | GGCGCGGGCG | ATACGAAGGT  | GACGTTGTTC  | AACAACGGCC  | GCCGAAACAG  |
| 29901 | CCAGCCAATC | AGCCTCGCCC  | ACCTTCTCCC  | ACCCCCACTG  | AAATCAGCTA  |
|       | GGTCGGTTAG | TCGGAGCGGG  | TGGAAGAGGG  | TGGGGGTGAC  | TTTAGTCGAT  |
| 29951 | CTTTAATCTA | ACAGGAGGAG  | ATGACTGACA  | CCCTAGATCT  | AGAAATGGAC  |
|       | GAAATTAGAT | TGTCCTCCTC  | TACTGACTGT  | GGGATCTAGA  | TCTTTACCTG  |
| 30001 | GGAATTATTA | CAGAGCAGCG  | CCTGCTAGAA  | AGACGCAGGG  | CAGCGGCCGA  |
|       | CCTTAATAAT | GTCTCGTCGC  | GGACGATCTT  | TCTGCGTCCC  | GTCGCCGGCT  |
| 30051 | GCAACAGCGC | ATGAATCAAG  | AGCTCCAAGA  | CATGGTTAAC  | TTGCACCAGT  |
|       | CGTTGTCGCG | TACTTAGTTC  | TCGAGGTTCT  | GTACCAATTG  | AACGTGGTCA  |
| 30101 | GCAAAAGGGG | TATCTTTTGT  | CTCGTAAAGC  | AGGCCAAAGT  | CACCTACGAC  |
|       | CGTTTTCCCC | ATAGAAAACA  | GAGCATTTTCG | TCCGGTTTCA  | GTGGATGCTG  |
| 30151 | AGTAATACCA | CCGGACACCG  | CCTTAGCTAC  | AAGTTGCCAA  | CCAAGCGTCA  |
|       | TCATTATGGT | GGCCTGTGGC  | GGAATCGATG  | TTCAACGGTT  | GGTTCGCAGT  |
| 30201 | GAAATTGGTG | GTCATGGTGG  | GAGAAAAGCC  | CATTACCATA  | ACTCAGCACT  |
|       | CTTTAACCAC | CAGTACCACC  | CTCTTTTTCGG | GTAATGGTAT  | TGAGTCGTGA  |
| 30251 | CGGTAGAAAC | CGAAGGCTGC  | ATTCACCTCAC | CTTGTC AAGG | ACCTGAGGAT  |
|       | GCCATCTTTG | GCTTCCGACG  | TAAGTGAGTG  | GAACAGTTCC  | TGGACTCCTA  |
| 30301 | CTCTGCACCC | TTATTAAGAC  | CCTGTGCGGT  | CTCAAAGATC  | TTATTCCCTT  |
|       | GAGACGTGGG | AATAATTCTG  | GGACACGCCA  | GAGTTTCTAG  | AATAAGGGAA  |
| 30351 | TAACTAATAA | AAAAAAATAA  | TAAAGCATCA  | CTTACTTAAA  | ATCAGTTAGC  |
|       | ATTGATTATT | TTTTTTTATT  | ATTTCGTAGT  | GAATGAATTT  | TAGTCAATCG  |

FIG. 16A-38

|       |                          |                          |                           |                          |                          |
|-------|--------------------------|--------------------------|---------------------------|--------------------------|--------------------------|
| 30401 | AAATTTCTGT<br>TTTAAAGACA | CCAGTTTATT<br>GGTCAAATAA | CAGCAGCACC<br>GTCGTCGTGG  | TCCTTGCCCT<br>AGGAACGGGA | CCTCCCAGCT<br>GGAGGGTCGA |
| 30451 | CTGGTATTGC<br>GACCATAACG | AGCTTCCTCC<br>TCGAAGGAGG | TGGCTGCAAA<br>ACCGACGTTT  | CTTTCTCCAC<br>GAAAGAGGTG | AATCTAAATG<br>TTAGATTTAC |
| 30501 | GAATGTCAGT<br>CTTACAGTCA | TTCTCCTGT<br>AAGGAGGACA  | TCCTGTCCAT<br>AGGACAGGTA  | CCGCACCCAC<br>GGCGTGGGTG | TATCTTCATG<br>ATAGAAGTAC |
| 30551 | TTGTTGCAGA<br>AACAACGTCT | TGAAGCGCGC<br>ACTTCGCGCG | AAGACCGTCT<br>TTCTGGCAGA  | GAAGATACCT<br>CTTCTATGGA | TCAACCCCGT<br>AGTTGGGGCA |
| 30601 | GTATCCATAT<br>CATAGGTATA | GACACGGAAA<br>CTGTGCCTTT | CCGGTCCTCC<br>GGCCAGGAGG  | AACTGTGCCT<br>TTGACACGGA | TTTCTTACTC<br>AAAGAATGAG |
| 30651 | CTCCCTTTGT<br>GAGGGAAACA | ATCCCCCAAT<br>TAGGGGGTTA | GGGTTTCAAG<br>CCCAAAGTTC  | AGAGTCCCCC<br>TCTCAGGGGG | TGGGGTACTC<br>ACCCCATGAG |
| 30701 | TCTTTGCGCC<br>AGAAACGCGG | TATCCGAACC<br>ATAGGCTTGG | TCTAGTTACC<br>AGATCAATGG  | TCCAATGGCA<br>AGGTTACCGT | TGCTTGCGCT<br>ACGAACGCGA |
| 30751 | CAAAATGGGC<br>GTTTTACCCG | AACGGCCTCT<br>TTGCCGGAGA | CTCTGGACGA<br>GAGACCTGCT  | GGCCGGCAAC<br>CCGGCCGTTG | CTTACCTCCC<br>GAATGGAGGG |
| 30801 | AAAATGTAAC<br>TTTTACATTG | CACTGTGAGC<br>GTGACACTCG | CCACCTCTCA<br>GGTGGAGAGT  | AAAAAACCBA<br>TTTTTTGGTT | GTCAAACATA<br>CAGTTTGTAT |
| 30851 | AACCTGGAAA<br>TTGGACCTTT | TATCTGCACC<br>ATAGACGTGG | CCTCACAGTT<br>GGAGTGTCBA  | ACCTCAGAAG<br>TGGAGTCTTC | CCCTAACTGT<br>GGGATTGACA |
| 30901 | GGCTGCCGCC<br>CCGACGGCGG | GCACCTCTAA<br>CGTGGAGATT | TGGTCGCGGG<br>ACCAGCGCCC  | CAACACACTC<br>GTTGTGTGAG | ACCATGCAAT<br>TGGTACGTTA |
| 30951 | CACAGGCCCC<br>GTGTCCGGGG | GCTAACCGTG<br>CGATTGGCAC | CACGACTCCA<br>GTGCTGAGGT  | AACTTAGCAT<br>TTGAATCGTA | TGCCACCCAA<br>ACGGTGGGTT |
| 31001 | GGACCCCTCA<br>CCTGGGGAGT | CAGTGTGAGA<br>GTCACAGTCT | AGGAAAGCTA<br>TCCTTTTCGAT | GCCCTGCAAA<br>CGGGACGTTT | CATCAGGCCC<br>GTAGTCCGGG |
| 31051 | CCTCACCACC<br>GGAGTGGTGG | ACCGATAGCA<br>TGGCTATCGT | GTACCCTTAC<br>CATGGGAATG  | TATCACTGCC<br>ATAGTGACGG | TCACCCCCTT<br>AGTGGGGGAA |
| 31101 | TAACTACTGC<br>ATTGATGACG | CACTGGTAGC<br>GTGACCATCG | TTGGGCATTG<br>AACCCGTAAC  | ACTTGAAAGA<br>TGAAC TTCT | GCCCATTTAT<br>CGGGTAAATA |
| 31151 | ACACAAAATG<br>TGTGTTTTAC | GAAAACTAGG<br>CTTTTGATCC | ACTAAAGTAC<br>TGATTTTCATG | GGGGCTCCTT<br>CCCCGAGGAA | TGCATGTAAC<br>ACGTACATTG |

FIG. 16A-39

|       |                          |                           |                          |                           |                           |
|-------|--------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 31201 | AGACGACCTA<br>TCTGCTGGAT | AACACTTTGA<br>TTGTGAAACT  | CCGTAGCAAC<br>GGCATCGTTG | TGGTCCAGGT<br>ACCAGGTCCA  | GTGACTATTA<br>CACTGATAAT  |
| 31251 | ATAATACTTC<br>TATTATGAAG | CTTGCAAACCT<br>GAACGTTTGA | AAAGTTACTG<br>TTTCAATGAC | GAGCCTTGGG<br>CTCGGAACCC  | TTTTGATTCA<br>AAAACATAAGT |
| 31301 | CAAGGCAATA<br>GTTCCGTTAT | TGCAACTTAA<br>ACGTTGAATT  | TGTAGCAGGA<br>ACATCGTCCT | GGACTAAGGA<br>CCTGATTCTT  | TTGATTCTCA<br>AACTAAGAGT  |
| 31351 | AAACAGACGC<br>TTTGTCTGCG | CTTATACTTG<br>GAATATGAAC  | ATGTTAGTTA<br>TACAATCAAT | TCCGTTTGAT<br>AGGCAAACCTA | GCTCAAAACC<br>CGAGTTTTTG  |
| 31401 | AACTAAATCT<br>TTGATTTAGA | AAGACTAGGA<br>TTCTGATCCT  | CAGGGCCCTC<br>GTCCCGGGAG | TTTTTATAAA<br>AAAAATATTT  | CTCAGCCCAC<br>GAGTCGGGTG  |
| 31451 | AACTTGATA<br>TTGAACCTAT  | TTAACTACAA<br>AATTGATGTT  | CAAAGGCCTT<br>GTTTCCGGAA | TACTTGTTTA<br>ATGAACAAAT  | CAGCTTCAAA<br>GTCGAAGTTT  |
| 31501 | CAATTCCAAA<br>GTTAAGGTTT | AAGCTTGAGG<br>TTCGAACTCC  | TTAACCTAAG<br>AATTGGATTC | CACTGCCAAG<br>GTGACGGTTC  | GGGTTGATGT<br>CCCAACTACA  |
| 31551 | TTGACGCTAC<br>AACTGCGATG | AGCCATAGCC<br>TCGGTATCGG  | ATTAATGCAG<br>TAATTACGTC | GAGATGGGCT<br>CTCTACCCGA  | TGAATTTGGT<br>ACTTAAACCA  |
| 31601 | TCACCTAATG<br>AGTGGATTAC | CACCAAACAC<br>GTGGTTTGTTG | AAATCCCCTC<br>TTTAGGGGAG | AAAACAAAAA<br>TTTTGTTTTT  | TTGGCCATGG<br>AACCGGTACC  |
| 31651 | CCTAGAATTT<br>GGATCTTAAA | GATTCAAACA<br>CTAAGTTTGT  | AGGCTATGGT<br>TCCGATACCA | TCCTAAACTA<br>AGGATTTGAT  | GGAAGTGGCC<br>CCTTGACCGG  |
| 31701 | TTAGTTTTGA<br>AATCAAAACT | CAGCACAGGT<br>GTCGTGTCCA  | GCCATTACAG<br>CGGTAATGTC | TAGGAAACAA<br>ATCCTTTGTT  | AAATAATGAT<br>TTTATTACTA  |
| 31751 | AAGCTAACTT<br>TTCGATTGAA | TGTGGACCAC<br>ACACCTGGTG  | ACCAGCTCCA<br>TGGTCGAGGT | TCTCCTAACT<br>AGAGGATTGA  | GTAGACTAAA<br>CATCTGATTT  |
| 31801 | TGCAGAGAAA<br>ACGTCTCTTT | GATGCTAAAC<br>CTACGATTTG  | TCACTTTGGT<br>AGTGAAACCA | CTTAACAAAA<br>GAATTGTTTT  | TGTGGCAGTC<br>ACACCGTCAG  |
| 31851 | AAATACTTGC<br>TTTATGAACG | TACAGTTTCA<br>ATGTCAAAGT  | GTTTTGGCTG<br>CAAACCGAC  | TTAAAGGCAG<br>AATTTCCGTC  | TTTGGCTCCA<br>AAACCGAGGT  |
| 31901 | ATATCTGGAA<br>TATAGACCTT | CAGTTCAAAG<br>GTCAAGTTTC  | TGCTCATCTT<br>ACGAGTAGAA | ATTATAAGAT<br>TAATATTCTA  | TTGACGAAAA<br>AACTGCTTTT  |
| 31951 | TGGAGTGCTA<br>ACCTCACGAT | CTAAACAATT<br>GATTTGTTAA  | CCTTCCTGGA<br>GGAAGGACCT | CCCAGAATAT<br>GGGTCTTATA  | TGGAAGTTTA<br>ACCTTGAAAT  |

FIG. 16A-40

|       |                           |                          |                          |                           |                           |
|-------|---------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
| 32001 | GAAATGGAGA<br>CTTTACCTCT  | TCTTACTGAA<br>AGAATGACTT | GGCACAGCCT<br>CCGTGTCGGA | ATACAAACGC<br>TATGTTTGCG  | TGTTGGATTT<br>ACAACCTAAA  |
| 32051 | ATGCCTAACC<br>TACGGATTGG  | TATCAGCTTA<br>ATAGTCGAAT | TCCAAAATCT<br>AGGTTTTAGA | CACGGTAAAA<br>GTGCCATTTT  | CTGCCAAAAG<br>GACGGTTTTTC |
| 32101 | TAACATTGTC<br>ATTGTAACAG  | AGTCAAGTTT<br>TCAGTTCAAA | ACTTAAACGG<br>TGAATTTGCC | AGACAAAACCT<br>TCTGTTTTGA | AAACCTGTAA<br>TTTGGACATT  |
| 32151 | CAC TAACCAT<br>GTGATTGGTA | TACACTAAAC<br>ATGTGATTTG | GGTACACAGG<br>CCATGTGTCC | AAACAGGAGA<br>TTTGTCTCTCT | CACAACTCCA<br>GTGTTGAGGT  |
| 32201 | AGTGCATACT<br>TCACGTATGA  | CTATGTCATT<br>GATACAGTAA | TTCATGGGAC<br>AAGTACCCTG | TGGTCTGGCC<br>ACCAGACCGG  | ACAAC TACAT<br>TGTTGATGTA |
| 32251 | TAATGAAATA<br>ATTACTTTAT  | TTTGCCACAT<br>AAACGGTGTA | CCTCTTACAC<br>GGAGAATGTG | TTTTTCATAC<br>AAAAAGTATG  | ATTGCCCAAG<br>TAACGGGGTTC |
| 32301 | AATAAAGAAT<br>TTATTTCTTA  | CGTTTGTGTT<br>GCAAACACAA | ATGTTTCAAC<br>TACAAAGTTG | GTGTTTATTT<br>CACAAATAAA  | TTCAATTGCA<br>AAGTTAACGT  |
| 32351 | GAAAATTTCA<br>CTTTTAAAGT  | AGTCATTTTT<br>TCAGTAAAAA | CATTCAGTAG<br>GTAAGTCATC | TATAGCCCCA<br>ATATCGGGGT  | CCACCACATA<br>GGTGGTGTAT  |
| 32401 | GCTTATACAG<br>CGAATATGTC  | ATCACCGTAC<br>TAGTGGCATG | CTTAATCAAA<br>GAATTAGTTT | CTCACAGAAC<br>GAGTGTCTTG  | CCTAGTATTC<br>GGATCATAAG  |
| 32451 | AACCTGCCAC<br>TTGGACGGTG  | CTCCCTCCCA<br>GAGGGAGGGT | ACACACAGAG<br>TGTGTGTCTC | TACACAGTCC<br>ATGTGTCAGG  | TTTCTCCCCG<br>AAAGAGGGGC  |
| 32501 | GCTGGCCTTA<br>CGACCGGAAT  | AAAAGCATCA<br>TTTTCGTAGT | TATCATGGGT<br>ATAGTACCCA | AACAGACATA<br>TTGTCTGTAT  | TTCTTAGGTG<br>AAGAATCCAC  |
| 32551 | TTATATTCCA<br>AATATAAGGT  | CACGGTTTCC<br>GTGCCAAAGG | TGTCGAGCCA<br>ACAGCTCGGT | AACGCTCATC<br>TTGCGAGTAG  | AGTGATATTA<br>TCACTATAAT  |
| 32601 | ATAAACTCCC<br>TATTTGAGGG  | CGGGCAGCTC<br>GCCCGTCGAG | ACTTAAGTTC<br>TGAATTCAAG | ATGTCGCTGT<br>TACAGCGACA  | CCAGCTGCTG<br>GGTCGACGAC  |
| 32651 | AGCCACAGGC<br>TCGGTGTCCG  | TGCTGTCCAA<br>ACGACAGGTT | CTTGCGGTTG<br>GAACGCCAAC | CTTAACGGGC<br>GAATTGCCCG  | GGCGAAGGAG<br>CCGCTTCCTC  |
| 32701 | AAGTCCACGC<br>TTCAGGTGCG  | CTACATGGGG<br>GATGTACCCC | GTAGAGTCAT<br>CATCTCAGTA | AATCGTG CAT<br>TTAGCACGTA | CAGGATAGGG<br>GTCCTATCCC  |
| 32751 | CGGTGGTGCT<br>GCCACCACGA  | GCAGCAGCGC<br>CGTCGTCGCG | GCGAATAAAC<br>CGCTTATTTG | TGCTGCCGCC<br>ACGACGGCGG  | GCCGCTCCGT<br>CGGCGAGGCA  |

FIG. 16A-41



|       |                          |                          |                          |                          |                          |
|-------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 32801 | CCTGCAGGAA<br>GGACGTCCTT | TACAACATGG<br>ATGTTGTACC | CAGTGGTCTC<br>GTCACCAGAG | CTCAGCGATG<br>GAGTCGCTAC | ATTCGCACCG<br>TAAGCGTGGC |
| 32851 | CCCGCAGCAT<br>GGGCGTCGTA | AAGGCGCCTT<br>TTCCGCGGAA | GTCCTCCGGG<br>CAGGAGGCC  | CACAGCAGCG<br>GTGTCGTCGC | CACCCTGATC<br>GTGGGACTAG |
| 32901 | TCACTTAAAT<br>AGTGAATTTA | CAGCACAGTA<br>GTCGTGTCAT | ACTGCAGCAC<br>TGACGTCGTG | AGCACCACAA<br>TCGTGGTGTT | TATTGTTCAA<br>ATAACAAGTT |
| 32951 | AATCCCACAG<br>TTAGGGTGTC | TGCAAGGCGC<br>ACGTTCCGCG | TGTATCCAAA<br>ACATAGGTTT | GCTCATGGCG<br>CGAGTACCGC | GGGACCACAG<br>CCCTGGTGTC |
| 33001 | AACCCACGTG<br>TTGGGTGCAC | GCCATCATA<br>CGGTAGTATG  | CACAAGCGCA<br>GTGTTGCGGT | GGTAGATTAA<br>CCATCTAATT | GTGGCGACCC<br>CACCGCTGGG |
| 33051 | CTCATAAACA<br>GAGTATTTGT | CGCTGGACAT<br>GCGACCTGTA | AAACATTACC<br>TTTGTAATGG | TCTTTTGGCA<br>AGAAAACCGT | TGTTGTAATT<br>ACAACATTAA |
| 33101 | CACCACCTCC<br>GTGGTGGAGG | CGGTACCATA<br>GCCATGGTAT | TAAACCTCTG<br>ATTTGGAGAC | ATTAAACATG<br>TAATTTGTAC | GCGCCATCCA<br>CGCGGTAGGT |
| 33151 | CCACCATCCT<br>GGTGGTAGGA | AAACCAGCTG<br>TTTGGTCGAC | GCCAAAACCT<br>CGGTTTGGGA | GCCCGCCGGC<br>CGGGCGGCCG | TATACACTGC<br>ATATGTGACG |
| 33201 | AGGGAACCGG<br>TCCCTTGGCC | GACTGGAACA<br>CTGACCTTGT | ATGACAGTGG<br>TACTGTCACC | AGAGCCCAGG<br>TCTCGGGTCC | ACTCGTAACC<br>TGAGCATTGG |
| 33251 | ATGGATCATC<br>TACCTAGTAG | ATGCTCGTCA<br>TACGAGCAGT | TGATATCAAT<br>ACTATAGTTA | GTTGGCACAA<br>CAACCGTGTT | CACAGGCACA<br>GTGTCCGTGT |
| 33301 | CGTGCATACA<br>GCACGTATGT | CTTCCTCAGG<br>GAAGGAGTCC | ATTACAAGCT<br>TAATGTTCGA | CCTCCCGCGT<br>GGAGGGCGCA | TAGAACCATA<br>ATCTTGGTAT |
| 33351 | TCCCAGGGAA<br>AGGGTCCCTT | CAACCCATTC<br>GTTGGGTAAG | CTGAATCAGC<br>GACTTAGTCG | GTAAATCCCA<br>CATTTAGGGT | CACTGCAGGG<br>GTGACGTCCC |
| 33401 | AAGACCTCGC<br>TTCTGGAGCG | ACGTAACTCA<br>TGCATTGAGT | CGTTGTGCAT<br>GCAACACGTA | TGTCAAAGTG<br>ACAGTTTCAC | TTACATTCGG<br>AATGTAAGCC |
| 33451 | GCAGCAGCGG<br>CGTCGTCGCC | ATGATCCTCC<br>TACTAGGAGG | AGTATGGTAG<br>TCATACCATC | CGCGGGTTTC<br>GCGCCCAAAG | TGTCTCAAAA<br>ACAGAGTTTT |
| 33501 | GGAGGTAGAC<br>CCTCCATCTG | GATCCCTACT<br>CTAGGGATGA | GTACGGAGTG<br>CATGCCTCAC | CGCCGAGACA<br>GCGGCTCTGT | ACCGAGATCG<br>TGGCTCTAGC |
| 33551 | TGTTGGTCGT<br>ACAACCAGCA | AGTGTCATGC<br>TCACAGTACG | CAAATGGAAC<br>GTTTACCTTG | GCCGGACGTA<br>CGGCCTGCAT | GTCATATTTT<br>CAGTATAAAG |

FIG. 16A-42

|       |                           |                           |                          |                          |                           |
|-------|---------------------------|---------------------------|--------------------------|--------------------------|---------------------------|
| 33601 | CTGAAGCAAA<br>GACTTCGTTT  | ACCAGGTGCG<br>TGGTCCACGC  | GGCGTGACAA<br>CCGCACTGTT | ACAGATCTGC<br>TGTCTAGACG | GTCTCCGGTC<br>CAGAGGCCAG  |
| 33651 | TCGCCGCTTA<br>AGCGGCGAAT  | GATCGCTCTG<br>CTAGCGAGAC  | TGTAGTAGTT<br>ACATCATCAA | GTAGTATATC<br>CATCATATAG | CACTCTCTCA<br>GTGAGAGAGT  |
| 33701 | AAGCATCCAG<br>TTCGTAGGTC  | GCGCCCCCTG<br>CGCGGGGGAC  | GCTTCGGGTT<br>CGAAGCCCAA | CTATGTAAAC<br>GATACATTTG | TCCTTCATGC<br>AGGAAGTACG  |
| 33751 | GCCGCTGCCC<br>CGGCGACGGG  | TGATAACATC<br>ACTATTGTAG  | CACCACCGCA<br>GTGGTGGCGT | GAATAAGCCA<br>CTTATTCGGT | CACCCAGCCA<br>GTGGGTCGGT  |
| 33801 | ACCTACACAT<br>TGGATGTGTA  | TCGTTCTGCG<br>AGCAAGACGC  | AGTCACACAC<br>TCAGTGTGTG | GGGAGGAGCG<br>CCCTCCTCGC | GGAAGAGCTG<br>CCTTCTCGAC  |
| 33851 | GAAGAACCAT<br>CTTCTTGGTA  | GTTTTTTTTT<br>CAAAAAAAAA  | TTATTCCAAA<br>AATAAGGTTT | AGATTATCCA<br>TCTAATAGGT | AAACCTCAAA<br>TTTGGAGTTT  |
| 33901 | ATGAAGATCT<br>TACTTCTAGA  | ATTAAGTGAA<br>TAATTCACCT  | CGCGCTCCCC<br>GCGCGAGGGG | TCCGGTGGCG<br>AGGCCACCGC | TGGTCAAACCT<br>ACCAGTTTGA |
| 33951 | CTACAGCCAA<br>GATGTCGGTT  | AGAACAGATA<br>TCTTGTCCTAT | ATGGCATTTC<br>TACCGTAAAC | TAAGATGTTG<br>ATTCTACAAC | CACAATGGCT<br>GTGTTACCGA  |
| 34001 | TCCAAAAGGC<br>AGGTTTTCCG  | AAACGGCCCT<br>TTTGCCGGGA  | CACGTCCAAG<br>GTGCAGGTTC | TGGACGTAAA<br>ACCTGCATTT | GGCTAAACCC<br>CCGATTTGGG  |
| 34051 | TTCAGGGTGA<br>AAGTCCCACCT | ATCTCCTCTA<br>TAGAGGAGAT  | TAAACATTCC<br>ATTTGTAAGG | AGCACCTTCA<br>TCGTGGAAGT | ACCATGCCCA<br>TGGTACGGGT  |
| 34101 | AATAATTCTC<br>TTATTAAGAG  | ATCTCGCCAC<br>TAGAGCGGTG  | CTTCTCAATA<br>GAAGAGTTAT | TATCTCTAAG<br>ATAGAGATTC | CAAATCCCGA<br>GTTTAGGGCT  |
| 34151 | ATATTAAGTC<br>TATAATTCAG  | CGGCCATTGT<br>GCCGGTAACA  | AAAAATCTGC<br>TTTTTAGACG | TCCAGAGCGC<br>AGGTCTCGCG | CCTCCACCTT<br>GGAGGTGGAA  |
| 34201 | CAGCCTCAAG<br>GTCGGAGTTC  | CAGCGAATCA<br>GTCGCTTAGT  | TGATTGCAAA<br>ACTAACGTTT | AATTCAGGTT<br>TTAAGTCCAA | CCTCACAGAC<br>GGAGTGTCTG  |
| 34251 | CTGTATAAGA<br>GACATATTCT  | TTCAAAAGCG<br>AAGTTTTTCGC | GAACATTAAC<br>CTTGTAATTG | AAAAATACCG<br>TTTTTATGGC | CGATCCCGTA<br>GCTAGGGCAT  |
| 34301 | GGTCCCTTCG<br>CCAGGGAAGC  | CAGGGCCAGC<br>GTCCCGGTCTG | TGAACATAAT<br>ACTTGTATTA | CGTGCAGGTC<br>GCACGTCCAG | TGCACGGACC<br>ACGTGCCTGG  |
| 34351 | AGCGCGGCCA<br>TCGCGCCGGT  | CTTCCCCGCC<br>GAAGGGGCGG  | AGGAACCATG<br>TCCTTGGTAC | ACAAAAGAAC<br>TGTTTTCTTG | CCACACTGAT<br>GGTGTGACTA  |

FIG. 16A-43

|       |                           |                           |                          |                           |                           |
|-------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|
| 34401 | TATGACACGC<br>ATACTGTGCG  | ATACTCGGAG<br>TATGAGCCTC  | CTATGCTAAC<br>GATACGATTG | CAGCGTAGCC<br>GTCGCATCGG  | CCGATGTAAG<br>GGCTACATTC  |
| 34451 | CTTGTTGCAT<br>GAACAACGTA  | GGGCGGCGAT<br>CCCGCCGCTA  | ATAAAATGCA<br>TATTTTACGT | AGGTGCTGCT<br>TCCACGACGA  | CAAAAAATCA<br>GTTTTTTAGT  |
| 34501 | GGCAAAGCCT<br>CCGTTTCGGA  | CGCGCAAAAA<br>GCGCGTTTTT  | AGAAAGCACA<br>TCTTTCGTGT | TCGTAGTCAT<br>AGCATCAGTA  | GCTCATGCAG<br>CGAGTACGTC  |
| 34551 | ATAAAGGCAG<br>TATTTCCGTC  | GTAAGCTCCG<br>CATTCGAGGC  | GAACCACCAC<br>CTTGGTGGTG | AGAAAAAGAC<br>TCTTTTTCTG  | ACCATTTTTC<br>TGGTAAAAAG  |
| 34601 | TCTCAAACAT<br>AGAGTTTGTA  | GTCTGCGGGT<br>CAGACGCCCA  | TTCTGCATAA<br>AAGACGTATT | ACACAAAATA<br>TGTGTTTTAT  | AAATAACAAA<br>TTTATTGTTT  |
| 34651 | AAAACATTTA<br>TTTTGTAAAT  | AACATTAGAA<br>TTGTAATCTT  | GCCTGTCTTA<br>CGGACAGAAT | CAACAGGAAA<br>GTTGTCCTTT  | AACAACCCTT<br>TTGTTGGGAA  |
| 34701 | ATAAGCATAA<br>TATTCGTATT  | GACGGACTAC<br>CTGCCTGATG  | GGCCATGCCG<br>CCGGTACGGC | GCGTGACCGT<br>CGCACTGGCA  | AAAAAAACTG<br>TTTTTTTTGAC |
| 34751 | GTCACCGTGA<br>CAGTGGCACT  | TTAAAAAGCA<br>AATTTTTTCGT | CCACCGACAG<br>GGTGGCTGTC | CTCCTCGGTC<br>GAGGAGCCAG  | ATGTCCGGAG<br>TACAGGCCTC  |
| 34801 | TCATAATGTA<br>AGTATTACAT  | AGACTCGGTA<br>TCTGAGCCAT  | AACACATCAG<br>TTGTGTAGTC | GTTGATTCAC<br>CAACTAAGTG  | ATCGGTCAGT<br>TAGCCAGTCA  |
| 34851 | GCTAAAAAGC<br>CGATTTTTTCG | GACCGAAATA<br>CTGGCTTTTAT | GCCCGGGGGA<br>CGGGCCCCCT | ATACATACCC<br>TATGTATGGG  | GCAGGCGTAG<br>CGTCCGCATC  |
| 34901 | AGACAACATT<br>TCTGTTGTAA  | ACAGCCCCCA<br>TGTCGGGGGT  | TAGGAGGTAT<br>ATCCTCCATA | AACAAAATTA<br>TTGTTTTAAT  | ATAGGAGAGA<br>TATCCTCTCT  |
| 34951 | AAAACACATA<br>TTTTGTGTAT  | AACACCTGAA<br>TTGTGGACTT  | AAACCCTCCT<br>TTTGGGAGGA | GCCTAGGCAA<br>CGGATCCGTT  | AATAGCACCC<br>TTATCGTGGG  |
| 35001 | TCCCGCTCCA<br>AGGGCGAGGT  | GAACAACATA<br>CTTGTTGTAT  | CAGCGCTTCC<br>GTCGCGAAGG | ACAGCGGCAG<br>TGTCGCCGTC  | CCATAACAGT<br>GGTATTGTCA  |
| 35051 | CAGCCTTACC<br>GTCGGAATGG  | AGTAAAAAAG<br>TCATTTTTTC  | AAAACCTATT<br>TTTTGGATAA | AAAAAAACAC<br>TTTTTTTTGTG | CACTCGACAC<br>GTGAGCTGTG  |
| 35101 | GGCACCAGCT<br>CCGTGGTCGA  | CAATCAGTCA<br>GTTAGTCAGT  | CAGTGTAATA<br>GTCACATTTT | AAGGGCCAAG<br>TTCCCGGTTC  | TGCAGAGCGA<br>ACGTCTCGCT  |
| 35151 | GTATATATAG<br>CATATATATC  | GACTAAAAAA<br>CTGATTTTTT  | TGACGTAACG<br>ACTGCATTGC | GTTAAAGTCC<br>CAATTCAGG   | ACAAAAAACA<br>TGTTTTTTGT  |

FIG. 16A-44

|       |             |            |            |            |            |
|-------|-------------|------------|------------|------------|------------|
| 35201 | CCCAGAAAAC  | CGCACGCGAA | CCTACGCCCA | GAAACGAAAG | CCAAAAAACC |
|       | GGGTCTTTTG  | GCGTGCGCTT | GGATGCGGGT | CTTTGCTTTC | GGTTTTTTTG |
| 35251 | CACAACTTCC  | TCAAATCGTC | ACTTCCGTTT | TCCCACGTTA | CGTCACTTCC |
|       | GTGTTGAAGG  | AGTTTAGCAG | TGAAGGCAAA | AGGGTGCAAT | GCAGTGAAGG |
| 35301 | CATTTTAAGA  | AAACTACAAT | TCCCAACACA | TACAAGTTAC | TCCGCCCTAA |
|       | GTAAAATTCT  | TTTGATGTTA | AGGGTTGTGT | ATGTTCAATG | AGGCGGGATT |
| 35351 | AACCTACGTC  | ACCCGCCCCG | TTCCCACGCC | CCGCGCCACG | TCACAAACTC |
|       | TTGGATGCAG  | TGGGCGGGGC | AAGGGTGCGG | GGCGCGGTGC | AGTGTTTGAG |
| 35401 | CACCCCCTCA  | TTATCATATT | GGCTTCAATC | CAAATAAGG  | TATATTATTG |
|       | GTGGGGGAGT  | AATAGTATAA | CCGAAGTTAG | GTTTTATTCC | ATATAATAAC |
|       | PacI        |            |            |            |            |
|       | ~~~~~       |            |            |            |            |
| 35451 | ATGATGTTAA  | TTAAGAATTC | GGATCTGCGA | CGCGAGGCTG | GATGGCCTTC |
|       | TACTACAATT  | AATTCTTAAG | CCTAGACGCT | GCGCTCCGAC | CTACCGGAAG |
| 35501 | CCCATTTATGA | TTCTTCTCGC | TTCCGGCGGC | ATCGGGATGC | CCGCGTTGCA |
|       | GGGTAATACT  | AAGAAGAGCG | AAGGCCGCCG | TAGCCCTACG | GGCGCAACGT |
| 35551 | GGCCATGCTG  | TCCAGGCAGG | TAGATGACGA | CCATCAGGGA | CAGCTTCAAG |
|       | CCGGTACGAC  | AGGTCCGTCC | ATCTACTGCT | GGTAGTCCCT | GTCGAAGTTC |
| 35601 | GCCAGCAAAA  | GGCCAGGAAC | CGTAAAAAGG | CCGCGTTGCT | GGCGTTTTTC |
|       | CGGTCGTTTT  | CCGGTCCTTG | GCATTTTTTC | GGCGCAACGA | CCGCAAAAAG |
| 35651 | CATAGGCTCC  | GCCCCCTGA  | CGAGCATCAC | AAAATCGAC  | GCTCAAGTCA |
|       | GTATCCGAGG  | CGGGGGGACT | GCTCGTAGTG | TTTTTAGCTG | CGAGTTCAGT |
| 35701 | GAGGTGGCGA  | AACCCGACAG | GACTATAAAG | ATACCAGGCG | TTTCCCCCTG |
|       | CTCCACCGCT  | TTGGGCTGTC | CTGATATTTT | TATGGTCCGC | AAAGGGGGAC |
| 35751 | GAAGCTCCCT  | CGTGCGCTCT | CCTGTTCCGA | CCCTGCCGCT | TACCGGATAC |
|       | CTTCGAGGGA  | GCACGCGAGA | GGACAAGGCT | GGGACGGCGA | ATGGCCTATG |
| 35801 | CTGTCCGCCT  | TTCTCCCTTC | GGGAAGCGTG | GCGCTTTCTC | ATAGCTCACG |
|       | GACAGGCGGA  | AAGAGGGAAG | CCCTTCGCAC | CGCGAAAGAG | TATCGAGTGC |
| 35851 | CTGTAGGTAT  | CTCAGTTCGG | TGTAGGTCGT | TCGCTCCAAG | CTGGGCTGTG |
|       | GACATCCATA  | GAGTCAAGCC | ACATCCAGCA | AGCGAGGTTC | GACCCGACAC |
| 35901 | TGCACGAACC  | CCCCGTTTCA | CCCGACCGCT | GCGCCTTATC | CGGTAACTAT |
|       | ACGTGCTTGG  | GGGGCAAGTC | GGGCTGGCGA | CGCGGAATAG | GCCATTGATA |

FIG. 16A-45

|       |                          |                          |                          |                           |                          |
|-------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|
| 35951 | CGTCTTGAGT<br>GCAGAACTCA | CCAACCCGGT<br>GGTTGGGCCA | AAGACACGAC<br>TTCTGTGCTG | TTATCGCCAC<br>AATAGCGGTG  | TGGCAGCAGC<br>ACCGTCGTCG |
| 36001 | CACTGGTAAC<br>GTGACCATTG | AGGATTAGCA<br>TCCTAATCGT | GAGCGAGGTA<br>CTCGCTCCAT | TGTAGGCGGT<br>ACATCCGCCA  | GCTACAGAGT<br>CGATGTCTCA |
| 36051 | TCTTGAAGTG<br>AGAACTTCAC | GTGGCCTAAC<br>CACCGGATTG | TACGGCTACA<br>ATGCCGATGT | CTAGAAGGAC<br>GATCTTCCTG  | AGTATTTGGT<br>TCATAAACCA |
| 36101 | ATCTGCGCTC<br>TAGACGCGAG | TGCTGAAGCC<br>ACGACTTCGG | AGTTACCTTC<br>TCAATGGAAG | GGAAAAAGAG<br>CCTTTTTTCTC | TTGGTAGCTC<br>AACCATCGAG |
| 36151 | TTGATCCGGC<br>AACTAGGCCG | AAACAAACCA<br>TTTGTTTGGT | CCGCTGGTAG<br>GGCGACCATC | CGGTGGTTTT<br>GCCACCAAAA  | TTTGTTTGCA<br>AAACAAACGT |
| 36201 | AGCAGCAGAT<br>TCGTCGTCTA | TACGCGCAGA<br>ATGCGCGTCT | AAAAAAGGAT<br>TTTTTTCCTA | CTCAAGAAGA<br>GAGTTCTTCT  | TCCTTTGATC<br>AGGAAACTAG |
| 36251 | TTTTCTACGG<br>AAAAGATGCC | GGTCTGACGC<br>CCAGACTGCG | TCAGTGGAAC<br>AGTCACCTTG | GAAAACTCAC<br>CTTTTGAGTG  | GTTAAGGGAT<br>CAATTCCCTA |
| 36301 | TTTGGTCATG<br>AAACCAGTAC | AGATTATCAA<br>TCTAATAGTT | AAAGGATCTT<br>TTCCTAGAA  | CACCTAGATC<br>GTGGATCTAG  | CTTTTAAATC<br>GAAAATTTAG |
| 36351 | AATCTAAAGT<br>TTAGATTTC  | ATATATGAGT<br>TATATACTCA | AACTTGGTC<br>TTTGAACCAG  | TGACAGTTAC<br>ACTGTCAATG  | CAATGCTTAA<br>GTTACGAATT |
| 36401 | TCAGTGAGGC<br>AGTCACTCCG | ACCTATCTCA<br>TGGATAGAGT | GCGATCTGTC<br>CGCTAGACAG | TATTTTCGTTC<br>ATAAAGCAAG | ATCCATAGTT<br>TAGGTATCAA |
| 36451 | GCCTGACTCC<br>CGGACTGAGG | CCGTCGTGTA<br>GGCAGCACAT | GATAACTACG<br>CTATTGATGC | ATACGGGAGG<br>TATGCCCTCC  | GCTTACCATC<br>CGAATGGTAG |
| 36501 | TGGCCCCAGT<br>ACCGGGGTCA | GCTGCAATGA<br>CGACGTTACT | TACCGCGAGA<br>ATGGCGCTCT | CCCACGCTCA<br>GGGTGCGAGT  | CCGGCTCCAG<br>GGCCGAGGTC |
| 36551 | ATTTATCAGC<br>TAAATAGTCG | AATAAACCAG<br>TTATTTGGTC | CCAGCCGGAA<br>GGTCGGCCTT | GGGCCGAGCG<br>CCCGGCTCGC  | CAGAAGTGGT<br>GTCTTCACCA |
| 36601 | CCTGCAACTT<br>GGACGTTGAA | TATCCGCCTC<br>ATAGGCGGAG | CATCCAGTCT<br>GTAGGTCAGA | ATTAATTGTT<br>TAATTAACAA  | GCCGGGAAGC<br>CGGCCCTTCG |
| 36651 | TAGAGTAAGT<br>ATCTCATTCA | AGTTCGCCAG<br>TCAAGCGGTC | TTAATAGTTT<br>AATTATCAAA | GCGCAACGTT<br>CGCGTTGCAA  | GTTGCCATTG<br>CAACGGTAAC |
| 36701 | CTACAGGCAT<br>GATGTCCGTA | CGTGGTGTCA<br>GCACCACAGT | CGCTCGTCGT<br>GCGAGCAGCA | TTGGTATGGC<br>AACCATACCG  | TTCATTCAGC<br>AAGTAAGTCG |

FIG. 16A-46



|       |                          |                          |                           |                            |                           |
|-------|--------------------------|--------------------------|---------------------------|----------------------------|---------------------------|
| 36751 | TCCGGTTCCC<br>AGGCCAAGGG | AACGATCAAG<br>TTGCTAGTTC | GCGAGTTACA<br>CGCTCAATGT  | TGATCCCCCA<br>ACTAGGGGGT   | TGTTGTGCAA<br>ACAACACGTT  |
| 36801 | AAAAGCGGTT<br>TTTTCGCCAA | AGCTCCTTCG<br>TCGAGGAAGC | GTCCTCCGAT<br>CAGGAGGCTA  | CGTTGTCAGA<br>GCAACAGTCT   | AGTAAGTTGG<br>TCATTCAACC  |
| 36851 | CCGCAGTGTT<br>GGCGTCACAA | ATCACTCATG<br>TAGTGAGTAC | GTTATGGCAG<br>CAATACCGTC  | CACTGCATAA<br>GTGACGTATT   | TTCTCTTACT<br>AAGAGAATGA  |
| 36901 | GTCATGCCAT<br>CAGTACGGTA | CCGTAAGATG<br>GGCATTCTAC | CTTTTCTGTG<br>GAAAAGACAC  | ACTGGTGAGT<br>TGACCACTCA   | ACTCAACCAA<br>TGAGTTGGTT  |
| 36951 | GTCATTCTGA<br>CAGTAAGACT | GAATAGTGTA<br>CTTATCACAT | TGCGGCGACC<br>ACGCCGCTGG  | GAGTTGCTCT<br>CTCAACGAGA   | TGCCCCGGCGT<br>ACGGGCCGCA |
| 37001 | CAACACGGGA<br>GTTGTGCCCT | TAATACCGCG<br>ATTATGGCGC | CCACATAGCA<br>GGTGTATCGT  | GAACTTTAAA<br>CTTGAAATTT   | AGTGCTCATC<br>TCACGAGTAG  |
| 37051 | ATTGGAAAAC<br>TAACCTTTTG | GTTCTTCGGG<br>CAAGAAGCCC | GCGAAAAC TC<br>CGCTTTTGAG | TCAAGGATCT<br>AGTTCCTAGA   | TACCGCTGTT<br>ATGGCGACAA  |
| 37101 | GAGATCCAGT<br>CTCTAGGTCA | TCGATGTAAC<br>AGCTACATTG | CCACTCGTGC<br>GGTGAGCACG  | ACCCA ACTGA<br>TGGGT TGACT | TCTTCAGCAT<br>AGAAGTCGTA  |
| 37151 | CTTTTACTTT<br>GAAAATGAAA | CACCAGCGTT<br>GTGGTCGCAA | TCTGGGTGAG<br>AGACCCACTC  | CAAAAACAGG<br>GTTTTTGTCC   | AAGGCAAAAT<br>TTCCGTTTTA  |
| 37201 | GCCGCAAAAA<br>CGGCGTTTTT | AGGGAATAAG<br>TCCCTTATTC | GGCGACACGG<br>CCGCTGTGCC  | AAATGTTGAA<br>TTTACA ACTT  | TACTCATACT<br>ATGAGTATGA  |
| 37251 | CTTCCTTTTT<br>GAAGGAAAAA | CAATATTATT<br>GTTATAATAA | GAAGCATTTA<br>CTTCGTAAAT  | TCAGGGTTAT<br>AGTCCCAATA   | TGTCTCATGA<br>ACAGAGTACT  |
| 37301 | GCGGATACAT<br>CGCCTATGTA | ATTTGAATGT<br>TAAACTTACA | ATTTAGAAAA<br>TAAATCTTTT  | ATAAACAAAT<br>TATTTGTTTA   | AGGGGTTC CG<br>TCCCCAAGGC |
| 37351 | CGCACATTTT<br>GCGTGTAAG  | CCCGAAAAGT<br>GGGCTTTTCA | GCCACCTGAC<br>CGGTGGACTG  | GTCTAAGAAA<br>CAGATTCTTT   | CCATTATTAT<br>GGTAATAATA  |
| 37401 | CATGACATTA<br>GTACTGTAAT | ACCTATAAAA<br>TGGATATTTT | ATAGGCGTAT<br>TATCCGCATA  | CACGAGGCCC<br>GTGCTCCGGG   | TTTCGTCTTC<br>AAAGCAGAAG  |
| 37451 | AAGAATTGGA<br>TTCTTAACCT | TCCGAATTCT<br>AGGCTTAAGA | TAAT<br>ATTA              |                            |                           |

FIG. 16A-47

|      |             |            |            |            |            |            |
|------|-------------|------------|------------|------------|------------|------------|
| 1    | CATCATCAAT  | AATATACCTT | ATTTTGGATT | GAAGCCAATA | TGATAATGAG | GGGGTGGAGT |
| 61   | TTGTGACGTG  | GCGCGGGGCG | TGGGAACGGG | GCGGGTGACG | TAGTAGTGTG | GCGGAAGTGT |
| 121  | GATGTTGTAA  | GTGTGGCGGA | ACACATGTAA | GCGCCGGATG | TGGTAAAAGT | GACGTTTTTG |
| 181  | GTGTGCGCCG  | GTGTACACGG | GAAGTGACAA | TTTTCGCGCG | GTTTTAGGCG | GATGTTGTAG |
| 241  | TAAATTTGGG  | CGTAACCAAG | TAATATTTGG | CCATTTTCGC | GGGAAAAGT  | AATAAGAGGA |
| 301  | AGTGAAATCT  | GAATAATTCT | GTGTTACTCA | TAGCGCGTAA | TATTTGTCTA | GGGCCGCGGG |
| 361  | GACTTTGACC  | GTTTACGTGG | AGACTCGCCC | AGGTGTTTTT | CTCAGGTGTT | TTCCGCGTTC |
| 421  | CGGGTCAAAG  | TTGGCGTTTT | ATTATTATAG | TCAGCTGACG | CGCAGTGTAT | TTATACCCGG |
| 481  | TGAGTTCCTC  | AAGAGGCCAC | TCTTGAGTGC | CAGCGAGTAG | AGTTTTCTCC | TCCGAGCCGC |
| 541  | TCCGACACCG  | GGACTGAAAA | TGAGACATAT | TATCTGCCAC | GGAGGTGTTA | TTACCGAAGA |
| 601  | AATGGCCGCC  | AGTCTTTTGG | ACCAGCTGAT | CGAAGAGGTA | CTGGCTGATA | ATCTTCCACC |
| 661  | TCCTAGCCAT  | TTTGAACCAC | CTACCCTTCA | CGAACTGTAT | GATTTAGACG | TGACGGCCCC |
| 721  | CGAAGATCCC  | AACGAGGAGG | CGGTTTCGCA | GATTTTTCCC | GAGTCTGTAA | TGTTGGCGGT |
| 781  | GCAGGAAGGG  | ATTGACTTAT | TCACTTTTCC | GCCGGCGCCC | GGTCTCCGG  | AGCCGCCTCA |
| 841  | CCTTTCCCGG  | CAGCCCGAGC | AGCCGGAGCA | GAGAGCCTTG | GGTCCGGTTT | CTATGCCAAA |
| 901  | CCTTG TGCCG | GAGGTGATCG | ATCTTACCTG | CCACGAGGCT | GGCTTTCCAC | CCAGTGACGA |
| 961  | CGAGGATGAA  | GAGGGTGAGG | AGTTTGTGTT | AGATTATGTG | GAGCACCCCG | GGCACGGTTG |
| 1021 | CAGGTCTTGT  | CATTATCACC | GGAGGAATAC | GGGGGACCCA | GATATTATGT | GTTGCTTTTG |
| 1081 | CTATATGAGG  | ACCTGTGGCA | TGTTTGTCTA | CAGTAAGTGA | AAAATTATGG | GCAGTGGGTG |
| 1141 | ATAGAGTGGT  | GGGTTTGGTG | TGGTAATTTT | TTTTTTAATT | TTTACAGTTT | TGTGGTTTAA |
| 1201 | AGAATTTTGT  | ATTGTGATTT | TTTAAAAGGT | CCTGTGTCTG | AACCTGAGCC | TGAGCCCGAG |
| 1261 | CCAGAACCGG  | AGCCTGCAAG | ACCTACCCGG | CGTCCTAAAT | TGGTGCCCTG | TATCCTGAGA |
| 1321 | CGCCCGACAT  | CACCTGTGTC | TAGAGAATGC | AATAGTAGTA | CGGATAGCTG | TGACTCCGGT |
| 1381 | CCTTCTAACA  | CACCTCCTGA | GATACACCCG | GTGGTCCCGC | TGTGCCCCAT | TAAACCAGTT |
| 1441 | GCCGTGAGAG  | TTGGTGGGCG | TCGCCAGGCT | GTGGAATGTA | TCGAGGACTT | GCTTAACGAG |
| 1501 | TCTGGGCAAC  | CTTTGGACTT | GAGCTGTAAA | CGCCCCAGGC | CATAAGGTGT | AAACCTGTGA |
| 1561 | TTGCGTGTGT  | GGTTAACGCC | TTTGTTTGCT | GAATGAGTTG | ATGTAAGTTT | AATAAAGGGT |
| 1621 | GAGATAATGT  | TTAACTTGCA | TGGCGTGTTA | AATGGGGCGG | GGCTTAAAGG | GTATATAATG |
| 1681 | CGCCGTGGGC  | TAATCTTGGT | TACATCTGAC | CTCATGGAGG | CTTGGGAGTG | TTTGGAAGAT |
| 1741 | TTTTCTGCTG  | TGCGTAACTT | GCTGGAACAG | AGCTCTAACA | GTACCTCTTG | GTTTTGGAGG |
| 1801 | TTTCTGTGGG  | GCTCCTCCCA | GGCAAAGTTA | GTCTGCAGAA | TTAAGGAGGA | TTACAAGTGG |
| 1861 | GAATTTGAAG  | AGCTTTTGAA | ATCCTGTGGT | GAGCTGTTTG | ATTCTTTGAA | TCTGGGTCAC |
| 1921 | CAGGCGCTTT  | TCCAAGAGAA | GGTCATCAAG | ACTTTGGATT | TTTCCACACC | GGGGCGCGCT |
| 1981 | GCGGCTGCTG  | TTGCTTTTTT | GAGTTTTATA | AAGGATAAAT | GGAGCGAAGA | AACCCATCTG |
| 2041 | AGCGGGGGGT  | ACCTGCTGGA | TTTTCTGGCC | ATGCATCTGT | GGAGAGCGGT | GGTGAGACAC |
| 2101 | AAGAATCGCC  | TGCTACTGTT | GTCCTCCGTC | CGCCCGGCAA | TAATACCGAC | GGAGGAGCAA |
| 2161 | CAGCAGGAGG  | AAGCCAGGCG | GCGGCGGCGG | CAGGAGCAGA | GCCCATGGAA | CCCGAGAGCC |
| 2221 | GGCCTGGACC  | CTCGGGAATG | AATGTTGTAC | AGGTGGCTGA | ACTGTTTCCA | GAAGTGGAGC |
| 2281 | GCATTTTAAC  | CATTAACGAG | GATGGGCAGG | GGCTAAAGGG | GGTAAAGAAG | GAGCGGGGGG |
| 2341 | CTTCTGAGGC  | TACAGAGGAG | GCTAGGAATC | TAACTTTTAG | CTTAATGACC | AGACACCGTC |
| 2401 | CTGAGTGTGT  | TACTTTTCAG | CAGATTAAGG | ATAATTGCGC | TAATGAGCTT | GATCTGCTGG |
| 2461 | CGCAGAAGTA  | TTCCATAGAG | CAGCTGACCA | CTTACTGGCT | GCAGCCAGGG | GATGATTTTG |
| 2521 | AGGAGGCTAT  | TAGGGTATAT | GCAAAGGTGG | CACTTAGGCC | AGATTGCAAG | TACAAGATTA |

FIG. 17A-1

|      |        |         |            |             |            |            |            |
|------|--------|---------|------------|-------------|------------|------------|------------|
| 2581 | GCAA   | ACTTGT  | AAATATCAGG | AATTGTTGCT  | ACATTTCTGG | GAACGGGGCC | GAGGTGGAGA |
| 2641 | TAGATA | CGGA    | GGATAGGGTG | GCCTTTAGAT  | GTAGCATGAT | AAATATGTGG | CCGGGGGTGC |
| 2701 | TTGG   | CATGGA  | CGGGGTGGTT | ATTATGAATG  | TGAGGTTTAC | TGGTCCCAAT | TTTAGCGGTA |
| 2761 | CGGT   | TTTCCT  | GGCCAATACC | AATCTTATCC  | TACACGGTGT | AAGCTTCTAT | GGGTTTAACA |
| 2821 | ATAC   | CTGTGT  | GGAAGCCTGG | ACCGATGTAA  | GGGTTCGGGG | CTGTGCCTTT | TACTGCTGCT |
| 2881 | GGAAG  | GGGGT   | GGTGTGTCGC | CCCAAAGCA   | GGGCTTCAAT | TAAGAAATGC | CTGTTTGAAA |
| 2941 | GGTG   | TACCTT  | GGGTATCCTG | TCTGAGGGTA  | ACTCCAGGGT | GCGCCACAAT | GTGGCCTCCG |
| 3001 | ACTGT  | GGTTG   | CTTTATGCTA | GTGAAAAGCG  | TGGCTGTGAT | TAAGCATAAC | ATGGTGTGTG |
| 3061 | GCAAC  | TGCGA   | GGACAGGGCC | TCTCAGATGC  | TGACCTGCTC | GGACGGCAAC | TGTCACCTGC |
| 3121 | TGAAG  | ACCAT   | TCACGTAGCC | AGCCACTCTC  | GCAAGGCCTG | GCCAGTGTTT | GAGCACAACA |
| 3181 | TACTG  | ACCCG   | CTGTTCTTG  | CATTTGGGTA  | ACAGGAGGGG | GGTGTTCTTA | CCTTACCAAT |
| 3241 | GCAAT  | TTTGAG  | TCACACTAAG | ATATTGCTTG  | AGCCCGAGAG | CATGTCCAAG | GTGAACCTGA |
| 3301 | ACGGG  | GTGTT   | TGACATGACC | ATGAAGATCT  | GGAAGGTGCT | GAGGTACGAT | GAGACCCGCA |
| 3361 | CCAGG  | TGCAG   | ACCCTGCGAG | TGTGGCGGTA  | AACATATTAG | GAACCAGCCT | GTGATGCTGG |
| 3421 | ATGTG  | ACCGA   | GGAGCTGAGG | CCCGATCACT  | TGGTGCTGGC | CTGCACCCGC | GCTGAGTTTG |
| 3481 | GCTCT  | AGCGA   | TGAAGATACA | GATTGAGGTA  | CTGAAATGTG | TGGGCGTGGC | TTAAGGGTGG |
| 3541 | GAAAG  | AATAT   | ATAAGGTGGG | GGTCTCATGT  | AGTTTTGTAT | CTGTTTTGCA | GCAGCCGCCG |
| 3601 | CCATG  | AGCGC   | CAACTCGTTT | GATGGAAGCA  | TTGTGAGCTC | ATATTTGACA | ACGCGCATGC |
| 3661 | CCCCA  | TGGGC   | CGGGGTGCGT | CAGAATGTGA  | TGGGCTCCAG | CATTGATGGT | CGCCCCGTCC |
| 3721 | TGCCC  | GCAAA   | CTCTACTACC | TTGACCTACG  | AGACCGTGTC | TGGAACGCCG | TTGGAGACTG |
| 3781 | CAGCC  | TCCGC   | CGCCGCTTCA | GCCGCTGCAG  | CCACCGCCCC | CGGGATTGTG | ACTGACTTTG |
| 3841 | CTTTC  | CTGAG   | CCCGCTTGCA | AGCAGTGCAG  | CTTCCCGTTC | ATCCGCCCGC | GATGACAAGT |
| 3901 | TGACG  | GCTCT   | TTTGGCACAA | TTGGATTCTT  | TGACCCGGGA | ACTTAATGTC | GTTTCTCAGC |
| 3961 | AGCTG  | TTTGA   | TCTGCGCCAG | CAGGTTTCTG  | CCCTGAAGGC | TTCTTCCCCT | CCCAATGCGG |
| 4021 | TTTAA  | AACAT   | AAATAAAAAC | CAGACTCTGT  | TTGGATTTGG | ATCAAGCAAG | TGTCTTGCTG |
| 4081 | TCTTT  | ATTTA   | GGGGTTTTGC | GCGCGCGGTA  | GGCCCGGGAC | CAGCGGTCTC | GGTCGTTGAG |
| 4141 | GGTC   | CCTGTGT | ATTTTTTCCA | GGACGTGGTA  | AAGGTGACTC | TGGATGTTCA | GATACATGGG |
| 4201 | CATAA  | GCCCG   | TCTCTGGGGT | GGAGGTAGCA  | CCACTGCAGA | GCTTCATGCT | GCGGGGTGGT |
| 4261 | GTTGT  | AGATG   | ATCCAGTCGT | AGCAGGAGCG  | CTGGGCGTGG | TGCCATAAAA | TGTCTTTCAG |
| 4321 | TAGCA  | AGCTG   | ATTGCCAGGG | GCAGGCCCTT  | GGTGTAAGTG | TTTACAAAGC | GGTTAAGCTG |
| 4381 | GGATG  | GGTGC   | ATACGTGGGG | ATATGAGATG  | CATCTTGAC  | TGTATTTTTA | GGTTGGCTAT |
| 4441 | GTTCC  | CAGCC   | ATATCCCTCC | GGGGATTTCAT | GTTGTGCAGA | ACCACCAGCA | CAGTGTATCC |
| 4501 | GGTGC  | ACTTG   | GGAAATTTGT | CATGTAGCTT  | AGAAGGAAAT | GCGTGGAAGA | ACTTGGAGAC |
| 4561 | GCCCT  | TGTGA   | CCTCCAAGAT | TTTCCATGCA  | TTCGTCCATA | ATGATGGCAA | TGGGCCCACG |
| 4621 | GGCGG  | CGGCC   | TGGGCGAAGA | TATTTCTGGG  | ATCACTAACG | TCATAGTTGT | GTTCCAGGAT |
| 4681 | GAGAT  | CGTCA   | TAGGCCATTT | TTACAAAGCG  | CGGGCGGAGG | GTGCCAGACT | GCGGTATAAT |
| 4741 | GGTT   | CCATCC  | GGCCCAGGGG | CGTAGTTACC  | CTCACAGATT | TGCATTTCCC | ACGCTTTGAG |
| 4801 | TTCA   | GATGGG  | GGGATCATGT | CTACCTGCGG  | GGCGATGAAG | AAAACCGTTT | CCGGGGTAGG |
| 4861 | GGAG   | ATCAGC  | TGGGAAGAAA | GCAGGTTCTT  | AAGCAGCTGC | GACTTACCGC | AGCCGGTGGG |
| 4921 | CCCG   | TAAATC  | ACACCTATTA | CCGGCTGCAA  | CTGGTAGTTA | AGAGAGCTGC | AGCTGCCGTC |
| 4981 | ATCC   | CTGAGC  | AGGGGGGCCA | CTTCGTTAAG  | CATGTCCCTG | ACTTGCAATG | TTTCCCTGAC |
| 5041 | CAAAT  | CCGCC   | AGAAGGCGCT | CGCCGCCCAG  | CGATAGCAGT | TCTTGCAAGG | AAGCAAAGTT |
| 5101 | TTTCA  | ACGGT   | TTGAGGCCGT | CCGCCGTAGG  | CATGCTTTTG | AGCGTTTGAC | CAAGCAGTTC |

FIG. 17A-2

|      |             |            |            |            |            |             |
|------|-------------|------------|------------|------------|------------|-------------|
| 5161 | CAGGCGGTCC  | CACAGCTCGG | TCACGTGCTC | TACGGCATCT | CGATCCAGCA | TATCTCCTCG  |
| 5221 | TTTCGCGGGT  | TGGGGCGGCT | TTCGCTGTAC | GGCAGTAGTC | GGTGCTCGTC | CAGACGGGGC  |
| 5281 | AGGGTCATGT  | CTTTCCACGG | GCGCAGGGTC | CTCGTCAGCG | TAGTCTGGGT | CACGGTGAAG  |
| 5341 | GGGTGCGCTC  | CGGGTTGCGC | GCTGGCCAGG | GTGCGCTTGA | GGCTGGTCCT | GCTGGTGCTG  |
| 5401 | AAGCGCTGCC  | GGTCTTCGCC | CTGCGCGTCG | GCCAGGTAGC | ATTTGACCAT | GGTGTCTATAG |
| 5461 | TCCAGCCCCT  | CCGCGGCGTG | GCCCTTGGCG | CGCAGCTTGC | CCTTGGAGGA | GGCGCCGCAC  |
| 5521 | GAGGGGCGAGT | GCAGACTTTT | AAGGGCGTAG | AGCTTGGGCG | CGAGAAATAC | CGATTCCGGG  |
| 5581 | GAGTAGGCAT  | CCGCGCCGCA | GGCCCCGCAG | ACGGTCTCGC | ATTCCACGAG | CCAGGTGAGC  |
| 5641 | TCTGGCCGTT  | CGGGGTCAAA | AACCAGGTTT | CCCCCATGCT | TTTTGATGCG | TTTCTTACCT  |
| 5701 | CTGGTTTCCA  | TGAGCCGGTG | TCCACGCTCG | GTGACGAAAA | GGCTGTCCGT | GTCCCCGTAT  |
| 5761 | ACAGACTTGA  | GAGGCCTGTC | CTCGAGCGGT | GTTCCGCGGT | CCTCCTCGTA | TAGAAACTCG  |
| 5821 | GACCACTCTG  | AGACGAAGGC | TCGCGTCCAG | GCCAGCACGA | AGGAGGCTAA | GTGGGAGGGG  |
| 5881 | TAGCGGTCGT  | TGTCCACTAG | GGGGTCCACT | CGCTCCAGGG | TGTGAAGACA | CATGTCGCCC  |
| 5941 | TCTTCGGCAT  | CAAGGAAGGT | GATTGGTTTA | TAGGTGTAGG | CCACGTGACC | GGGTGTTTCT  |
| 6001 | GAAGGGGGGC  | TATAAAAGGG | GGTGGGGGCG | CGTTCGTCCT | CACTCTCTTC | CGCATCGCTG  |
| 6061 | TCTGCGAGGG  | CCAGCTGTTG | GGGTGAGTAC | TCCCTCTCAA | AAGCGGGCAT | GACTTCTGCG  |
| 6121 | CTAAGATTGT  | CAGTTTCCAA | AAACGAGGAG | GATTTGATAT | TCACCTGGCC | CGCGGTGATG  |
| 6181 | CCTTTGAGGG  | TGGCCGCGTC | CATCTGGTCA | GAAAAGACAA | TCTTTTTGTT | GTCAAGCTTG  |
| 6241 | GTGGCAAACG  | ACCCGTAGAG | GGCGTTGGAC | AGCAACTTGG | CGATGGAGCG | CAGGGTTTGG  |
| 6301 | TTTTTGTCGC  | GATCGGCGCG | CTCCTTGGCC | GCGATGTTTA | GCTGCACGTA | TTCGCGCGCA  |
| 6361 | ACGCACCGCC  | ATTCGGGAAA | GACGGTGGTG | CGCTCGTCGG | GCACTAGGTG | CACGCGCCAA  |
| 6421 | CCGCGGTTGT  | GCAGGGTGAC | AAGGTCAACG | CTGGTGGCTA | CCTCTCCGCG | TAGGCGCTCG  |
| 6481 | TTGGTCCAGC  | AGAGGCGGCC | GCCCTTGCGC | GAGCAGAATG | GCGGTAGTGG | GTCTAGCTGC  |
| 6541 | GTCTCGTCCG  | GGGGGTCTGC | GTCCACGGTA | AAGACCCCGG | GCAGCAGGCG | CGCGTCGAAG  |
| 6601 | TAGTCTATCT  | TGCATCCTTG | CAAGTCTAGC | GCCTGCTGCC | ATGCGCGGGC | GGCAAGCGCG  |
| 6661 | CGCTCGTATG  | GGTTGAGTGG | GGGACCCCAT | GGCATGGGGT | GGGTGAGCGC | GGAGGCGTAC  |
| 6721 | ATGCCGCAAA  | TGTCGTAAAC | GTAGAGGGGC | TCTCTGAGTA | TTCCAAGATA | TGTAGGGTAG  |
| 6781 | CATCTTCCAC  | CGCGGATGCT | GGCGCGCACG | TAATCGTATA | GTTCGTGCGA | GGGAGCGAGG  |
| 6841 | AGGTCGGGAC  | CGAGGTTGCT | ACGGGCGGGC | TGCTCTGCTC | GGAAGACTAT | CTGCCTGAAG  |
| 6901 | ATGGCATGTG  | AGTTGGATGA | TATGGTTGGA | CGCTGGAAGA | CGTTGAAGCT | GGCGTCTGTG  |
| 6961 | AGACCTACCG  | CGTCACGCAC | GAAGGAGGCG | TAGGAGTCGC | GCAGCTTGTT | GACCAGCTCG  |
| 7021 | GCGGTGACCT  | GCACGTCTAG | GGCGCAGTAG | TCCAGGGTTT | CCTTGATGAT | GTCATACTTA  |
| 7081 | TCCTGTCCCT  | TTTTTTTCCA | CAGCTCGCGG | TTGAGGACAA | ACTCTTCGCG | GTCTTTCCAG  |
| 7141 | TACTCTTGGA  | TCGGAAACCC | GTCGGCCTCC | GAACGGTAAG | AGCCTAGCAT | GTAGAACTGG  |
| 7201 | TTGACGGCCT  | GGTAGGCGCA | GCATCCCTTT | TCTACGGGTA | GCGCGTATGC | CTGCGCGGCC  |
| 7261 | TTCCGGAGCG  | AGGTGTGGGT | GAGCGCAAAG | GTGTCCCTAA | CCATGACTTT | GAGGTACTGG  |
| 7321 | TATTTGAAGT  | CAGTGTCGTC | GCATCCGCCC | TGCTCCCAGA | GCAAAAAGTC | CGTGCGCTTT  |
| 7381 | TTGGAACGCG  | GGTTTGGCAG | GGCGAAGGTG | ACATCGTTGA | AGAGTATCTT | TCCCGCGCGA  |
| 7441 | GGCATAAAGT  | TGCGTGTGAT | GCGGAAGGGT | CCCGGCACCT | CGGAACGGTT | GTTAATTACC  |
| 7501 | TGGGCGGCGA  | GCACGATCTC | GTCAAAGCCG | TTGATGTTGT | GGCCACAAAT | GTAAAGTTCC  |
| 7561 | AAGAAGCGCG  | GGATGCCCTT | GATGGAAGGC | AATTTTTTAA | GTTCTCTGTA | GGTGAGCTCT  |
| 7621 | TCAGGGGAGC  | TGAGCCCGTG | CTCTGAAAGG | GCCCAGTCTG | CAAGATGAGG | GTTGGAAGCG  |
| 7681 | ACGAATGAGC  | TCCACAGGTC | ACGGGCCATT | AGCATTTGCA | GGTGGTCGCG | AAAGGTCCTA  |

FIG. 17A-3



7741 AACTGGCGAC CTATGGCCAT TTTTCTGGG GTGATGCAGT AGAAGGTAAG CGGGTCTTGT  
7801 TCCCAGCGGT CCCATCCAAG GTCCGCGGCT AGGTCTCGCG CGGCGGTCAC TAGAGGCTCA  
7861 TCTCCGCCGA ACTTCATGAC CAGCATGAAG GGCACGAGCT GCTTCCCAA GGCCCCATC  
7921 CAAGTATAGG TCTCTACATC GTAGGTGACA AAGAGACGCT CGGTGCGAGG ATGCGAGCCG  
7981 ATCGGGAAGA ACTGGATCTC CCGCCACCAG TTGGAGGAGT GGCTGTTGAT GTGGTGAAAG  
8041 TAGAAGTCCC TGCGACGGGC CGAACACTCG TGCTGGCTTT TGTA AAAACG TCGCAGTAC  
8101 TGGCAGCGGT GCACGGGCTG TACATCCTGC ACGAGGTTGA CCTGACGACC GCGCACAAGG  
8161 AAGCAGAGTG GGAATTTGAG CCCCTCGCCT GGCGGGTTTG GCTGGTGGTC TTCTACTTCG  
8221 GCTGCTTGTC CTTGACCGTC TGGCTGCTCG AGGGGAGTTA CGGTGGATCG GACCACCACG  
8281 CCGCGCGAGC CCAAAGTCCA GATGTCCGCG CGCGGCGGTC GGAGCTTGAT GACAACATCG  
8341 CGCAGATGGG AGCTGTCCAT GGTCTGGAGC TCCCGCGGCG TCAGGTCAGG CGGGAGCTCC  
8401 TGCAGGTTTA CCTCGCATAG CCGGGTCAGG GCGCGGGCTA GGTCCAGGTG ATACCTGATT  
8461 TCCAGGGGCT GGTTGGTGGC GGCGTCGATG GCTTGCAAGA GGCCGCATCC CCGCGGCGCG  
8521 ACTACGGTAC CGCGCGGCGG GCGGTGGGCC GCGGGGGTGT CCTTGGATGA TGCATCTAAA  
8581 AGCGGTGACG CGGGCGGGCC CCCGGAGGTA GGGGGGGCTC GGGACCCGCC GGGAGAGGGG  
8641 GCAGGGGCAC GTCGGCGCCG CGCGCGGGCA GGAGCTGGTG CTGCGCGCGG AGGTTGCTGG  
8701 CGAACGCGAC GACGCGGCGG TTGATCTCCT GAATCTGGCG CCTCTGCGTG AAGACGACGG  
8761 GCCCGGTGAG CTTGAACCTG AAAGAGAGTT CGACAGAATC AATTTCGGTG TCGTTGACGG  
8821 CGGCCTGGCG CAAAATCTCC TGCACGTCTC CTGAGTTGTC TTGATAGGCG ATCTCGGCCA  
8881 TGAAGTGCTC GATCTCTTCC TCCTGGAGAT CTCCGCGTCC GGCTCGCTCC ACGGTGGCGG  
8941 CGAGGTCGTT GGAGATGCGG GCCATGAGCT GCGAGAAGGC GTTGAGGCCT CCCTCGTTCC  
9001 AGACGCGGCT GTAGACCACG CCCCTTTCGG CATCGCGGGC GCGCATGACC ACCTGCGCGA  
9061 GATTGAGCTC CACGTGCCGG GCGAAGACGG CGTAGTTTCG CAGGCGCTGA AAGAGGTAGT  
9121 TGAGGGTGGT GGCGGTGTGT TCTGCCACGA AGAAGTACAT AACCCAGCGC CGCAACGTGG  
9181 ATTCGTTGAT ATCCCCAAG GCCTCAAGGC GCTCCATGGC CTCGTAGAAG TCCACGGCGA  
9241 AGTTGAAAAA CTGGGAGTTG CGCGCCGACA CGGTAACTC CTCCTCCAGA AGACGGATGA  
9301 GCTCGGCGAC AGTGTGCGGC ACCTCGCGCT CAAAGGCTAC AGGGGCCTCT TCTTCTTCTT  
9361 CAATCTCCTC TTCCATAAGG GCCTCCCCTT CTTCTTCTTC TGGCGGCGGT GGGGGAGGGG  
9421 GGACACGGCG GCGACGACGG CGCACC GGGA GGCGGTCGAC AAAGCGCTCG ATCATCTCCC  
9481 CGCGGCGACG GCGCATGGTC TCGGTGACGG CGCGGCCGTT CTCGCGGGGG CGCAGTTGGA  
9541 AGACGCCGCC CGTCATGTCC CGGTTATGGG TTGGCGGGGG GCTGCCGTGC GGCAGGGATA  
9601 CGGCGCTAAC GATGCATCTC AACAATTGTT GTGTAGGTAC TCCGCCACCG AGGGACCTGA  
9661 GCGAGTCCGC ATCGACCGGA TCGGAAAACC TCTCGAGAAA GGCGTCTAAC CAGTCACAGT  
9721 CGCAAGGTAG GCTGAGCACC GTGGCGGGCG GCAGCGGGCG GCGGTCGGGG TTGTTTCTGG  
9781 CGGAGGTGCT GCTGATGATG TAATTAAAGT AGGCGGTCTT GAGACGGCGG ATGGTCGACA  
9841 GAAGCACCAT GTCCTTGGGT CCGGCCTGCT GAATGCGCAG GCGGTCGGCC ATGCCCCAGG  
9901 CTTCTGTTTTG ACATCGGCGC AGGTCTTTGT AGTAGTCTTG CATGAGCCTT TCTACCGGCA  
9961 CTTCTTCTTC TCCTTCCTCT TGTCCTGCAT CTCTTGATC TATCGCTGCG GCGGCGGCGG  
10021 AGTTTGGCCG TAGGTGGCGC CCTCTTCCTC CCATGCGTGT GACCCCGAAG CCCCTCATCG  
10081 GCTGAAGCAG GGCCAGGTCG GCGACAACGC GCTCGGCTAA TATGGCCTGC TGCACCTGCG  
10141 TGAGGGTAGA CTGGAAGTCG TCCATGTCCA CAAAGCGGTG GTATGCGCCC GTGTTGATGG  
10201 TGTAAGTGCA GTTGGCCATA ACGGACCAGT TAACGGTCTG GTGACCCGGC TCGGAGAGCT  
10261 CGGTGTACCT GAGACGCGAG TAAGCCCTTG AGTCAAAGAC GTAGTCGTTG CAAGTCCGCA

FIG. 17A-4



|       |             |             |             |            |             |            |
|-------|-------------|-------------|-------------|------------|-------------|------------|
| 10321 | CCAGGTACTG  | GTATCCCACC  | AAAAAGTGCG  | GCGGCGGCTG | GCGGTAGAGG  | GGCCAGCGTA |
| 10381 | GGGTGGCCGG  | GGCTCCGGGG  | GCGAGGTCTT  | CCAACATAAG | GCGATGATAT  | CCGTAGATGT |
| 10441 | ACCTGGACAT  | CCAGGTGATG  | CCGGCGGCGG  | TGGTGGAGGC | GCGCGGAAAG  | TCACGGACGC |
| 10501 | GGTTCCAGAT  | GTTGCGCAGC  | GGCAAAAAGT  | GCTCCATGGT | CGGGACGCTC  | TGGCCGGTCA |
| 10561 | GGCGCGCGCA  | GTCGTTGACG  | CTCTAGACCG  | TGCAAAAGGA | GAGCCTGTAA  | GCGGGCACTC |
| 10621 | TTCCGTGGTC  | TGGTGGATAA  | ATTCGCAAGG  | GTATCATGGC | GGACGACCGG  | GGTTCGAACC |
| 10681 | CCGGATCCGG  | CCGTCCGCCG  | TGATCCATGC  | GGTTACCGCC | CGCGTGTCTGA | ACCCAGGTGT |
| 10741 | GCGACGTCAG  | ACAACGGGGG  | AGCGCTCCTT  | TTGGCTTCCT | TCCAGGCGCG  | GCGGATGCTG |
| 10801 | CGCTAGCTTT  | TTTGGCCACT  | GGCCGCGCGC  | GGCGTAAGCG | GTTAGGCTGG  | AAAGCGAAAG |
| 10861 | CATTAAGTGG  | CTCGCTCCCT  | GTAGCCGGAG  | GGTTATTTTC | CAAGGGTTGA  | GTCGCGGGAC |
| 10921 | CCCCGGTTCG  | AGTCTCGGGC  | CGGCCGGACT  | GCGGCGAACG | GGGGTTTGCC  | TCCCCGTCAT |
| 10981 | GCAAGACCCC  | GCTTGCAAAT  | TCCTCCGGAA  | ACAGGGACGA | GCCCCTTTTT  | TGCTTTTCCC |
| 11041 | AGATGCATCC  | GGTGCTGCGG  | CAGATGCGCC  | CCCCTCCTCA | GCAGCGGCAA  | GAGCAAGAGC |
| 11101 | AGCGGCAGAC  | ATGCAGGGCA  | CCCTCCCCTT  | CTCCTACCGC | GTCAGGAGGG  | GCAACATCCG |
| 11161 | CGGCTGACGC  | GGCGGCAGAT  | GGTGATTACG  | AACCCCCGCG | GCGCCGGACC  | CGGCACTACT |
| 11221 | TGGA CTTGGA | GGAGGGCGAG  | GGCCTGGCGC  | GGCTAGGAGC | GCCCTCTCCT  | GAGCGACACC |
| 11281 | CAAGGGTGCA  | GCTGAAGCGT  | GACACGCGCG  | AGGCGTACGT | GCCGCGGCAG  | AACCTGTTTC |
| 11341 | GCGACCGCGA  | GGGAGAGGAG  | CCCGAGGAGA  | TGCGGGATCG | AAAGTTCCAT  | GCAGGGCGCG |
| 11401 | AGTTGCGGCA  | TGGCCTGAAC  | CGCGAGCGGT  | TGCTGCGCGA | GGAGGACTTT  | GAGCCCGACG |
| 11461 | CGCGGACCGG  | GATTAGTCCC  | GCGCGCGCAC  | ACGTGGCGGC | CGCCGACCTG  | GTAACCGCGT |
| 11521 | ACGAGCAGAC  | GGTGAACCAG  | GAGATTA ACT | TTCAAAAAG  | CTTTAACAAC  | CACGTGCGCA |
| 11581 | CGCTTGTGGC  | GCGCGAGGAG  | GTGGCTATAG  | GACTGATGCA | TCTGTGGGAC  | TTTGTAAGCG |
| 11641 | CGCTGGAGCA  | AAACCCAAAT  | AGCAAGCCGC  | TCATGGCGCA | GCTGTTCCTT  | ATAGTGCAGC |
| 11701 | ACAGCAGGGA  | CAACGAGGCA  | TTCAGGGATG  | CGCTGCTAAA | CATAGTAGAG  | CCCGAGGGCC |
| 11761 | GCTGGCTGCT  | CGATTTGATA  | AACATTCTGC  | AGAGCATAGT | GGTGCAGGAG  | CGCAGCTTGA |
| 11821 | GCCTGGCTGA  | CAAGGTGGCC  | GCCATTA ACT | ATTCCATGCT | CAGTCTGGGC  | AAGTTTTACG |
| 11881 | CCCGCAAGAT  | ATACCATA CC | CCTTACGTTC  | CCATAGACAA | GGAGGTAAAG  | ATCGAGGGGT |
| 11941 | TCTACATGCG  | CATGGCGCTG  | AAGGTGCTTA  | CCTTGAGCGA | CGACCTGGGC  | GTTTATCGCA |
| 12001 | ACGAGCGCAT  | CCACAAGGCC  | GTGAGCGTGA  | GCCGGCGGCG | CGAGCTCAGC  | GACCGCGAGC |
| 12061 | TGATGCACAG  | CCTGCAAAGG  | GCCCTGGCTG  | GCACGGGCAG | CGGCGATAGA  | GAGGCCGAGT |
| 12121 | CCTACTTTGA  | CGCGGGCGCT  | GACCTGCGCT  | GGGCCCCAAG | CCGACGCGCC  | CTGGAGGCAG |
| 12181 | CTGGGGCCGG  | ACCTGGGCTG  | GCGGTGGCAC  | CCGCGCGCGC | TGGCAACGTC  | GGCGGCGTGG |
| 12241 | AGGAATATGA  | CGAGGACGAT  | GAGTACGAGC  | CAGAGGACGG | CGAGTACTAA  | GCGGTGATGT |
| 12301 | TTCTGATCAG  | ATGATGCAAG  | ACGCAACGGA  | CCCGGCGGGT | CGGGCGGCGC  | TGCAGAGCCA |
| 12361 | GCCGTCCGGC  | CTTAACTCCA  | CGGACGACTG  | GCGCCAGGTC | ATGGACCGCA  | TCATGTCGCT |
| 12421 | GACTGCGCGC  | AACCCTGACG  | CGTTCCGGCA  | GCAGCCGCAG | GCCAACCGGC  | TCTCCGCAAT |
| 12481 | TCTGGAAGCG  | GTGGTCCCGG  | CGCGCGCAAA  | CCCCACGCAC | GAGAAGGTGC  | TGGCGATCGT |
| 12541 | AAACGCGCTG  | GCCGAAAACA  | GGGCCATCCG  | GCCCGATGAG | GCCGGCCTGG  | TCTACGACGC |
| 12601 | GCTGCTTCAG  | CGCGTGGCTC  | GTTACAACAG  | CAGCAACGTG | CAGACCAACC  | TGGACCGGCT |
| 12661 | GGTGGGGGAT  | GTGCGCGAGG  | CCGTGGCGCA  | GCGTGAGCGC | GCGCAGCAGC  | AGGGCAACCT |
| 12721 | GGGCTCCATG  | GTTGCACTAA  | ACGCCTTCCT  | GAGTACACAG | CCCGCCAACG  | TGCCGCGGGG |
| 12781 | ACAGGAGGAC  | TACACCAACT  | TTGTGAGCGC  | ACTGCGGCTA | ATGGTGACTG  | AGACACCGCA |
| 12841 | AAGTGAGGTG  | TATCAGTCCG  | GGCCAGACTA  | TTTTTTCCAG | ACCAGTAGAC  | AAGGCCTGCA |

FIG. 17A-5

|       |            |             |             |             |             |            |
|-------|------------|-------------|-------------|-------------|-------------|------------|
| 12901 | GACCGTAAAC | CTGAGCCAGG  | CTTTCAAGAA  | CTTGCAGGGG  | CTGTGGGGGG  | TGCGGGCTCC |
| 12961 | CACAGGCGAC | CGCGCGACCG  | TGTCTAGCTT  | GCTGACGCCC  | AACTCGCGCC  | TGTTGCTGCT |
| 13021 | GCTAATAGCG | CCCTTCACGG  | ACAGTGGCAG  | CGTGTCCCGG  | GACACATACC  | TAGGTCACTT |
| 13081 | GCTGACACTG | TACCGCGAGG  | CCATAGGTCA  | GGCGCATGTG  | GACGAGCATA  | CTTTCCAGGA |
| 13141 | GATTACAAGT | GTTAGCCGCG  | CGCTGGGGCA  | GGAGGACACG  | GGCAGCCTGG  | AGGCAACCCT |
| 13201 | GAACTACCTG | CTGACCAACC  | GGCGGCAAAA  | AATCCCCTCG  | TTGCACAGTT  | TAAACAGCGA |
| 13261 | GGAGGAGCGC | ATTTTGCGCT  | ATGTGCAGCA  | GAGCGTGAGC  | CTTAACCTGA  | TGCGCGACGG |
| 13321 | GGTAACGCCC | AGCGTGGCGC  | TGGACATGAC  | CGCGCGCAAC  | ATGGAACCGG  | GCATGTATGC |
| 13381 | CTCAAACCGG | CCGTTTATCA  | ATCGCCTAAT  | GGACTACTTG  | CATCGCGCGG  | CCGCCGTGAA |
| 13441 | CCCCGAGTAT | TTCACCAATG  | CCATCTTGAA  | CCCGCACTGG  | CTACCGCCCC  | CTGGTTTCTA |
| 13501 | CACCGGGGGA | TTCGAGGTGC  | CCGAGGGTAA  | CGATGGATTC  | CTCTGGGACG  | ACATAGACGA |
| 13561 | CAGCGTGTTT | TCCCCGCAAC  | CGCAGACCCT  | GCTAGAGTTG  | CAACAACGCG  | AGCAGGCAGA |
| 13621 | GGCGGCGCTG | CGAAAGGAAA  | GCTTCCGCAG  | GCCAAGCAGC  | TTGTCCGATC  | TAGGCGCTGC |
| 13681 | GGCCCCGCGG | TCAGATGCTA  | GTAGCCCATT  | TCCAAGCTTG  | ATAGGGTCTC  | TTACCAGCAC |
| 13741 | TCGCACCACC | CGCCCGCGCC  | TGCTGGGCGA  | GGAGGAGTAC  | CTAAACAACCT | CGCTGCTGCA |
| 13801 | GCCGCAGCGC | GAAAAGAACC  | TGCCTCCGGC  | GTTTCCCAAC  | AACGGGATAG  | AGAGCCTAGT |
| 13861 | GGACAAGATG | AGTAGATGGA  | AGACGTATGC  | GCAGGAGCAC  | AGGGATGTGC  | CCGGCCCCGG |
| 13921 | CCCGCCCACC | CGTCGTCAAA  | GGCACGACCG  | TCAGCGGGGT  | CTGGTGTGGG  | AGGACGATGA |
| 13981 | CTCGGCAGAC | GACAGCAGCG  | TCTTGGAATTT | GGGAGGGAGT  | GGCAACCCGT  | TTGCACACCT |
| 14041 | TCGCCCCAGG | CTGGGGAGAA  | TGTTTTAAAA  | AAAGCATGAT  | GCAAAATAAA  | AAACTCACCA |
| 14101 | AGGCCATGGC | ACCGAGCGTT  | GGTTTTCTTG  | TATTCCTT    | AGTATGCGGC  | GCGCGGCGAT |
| 14161 | GTATGAGGAA | GGTCCTCCTC  | CCTCCTACGA  | GAGCGTGGTG  | AGCGCGGCGC  | CAGTGGCGGC |
| 14221 | GGCGCTGGGT | TCACCCTTCG  | ATGCTCCCCT  | GGACCCGCCG  | TCGTGCCTC   | CGCGGTACCT |
| 14281 | GCGGCCTACC | GGGGGGAGAA  | ACAGCATCCG  | TTACTCTGAG  | TTGGCACCCC  | TATTCGACAC |
| 14341 | CACCCGTGTG | TACCTTGTGG  | ACAACAAGTC  | AACGGATGTG  | GCATCCCTGA  | ACTACCAGAA |
| 14401 | CGACCACAGC | AACTTTCTAA  | CCACGGTCAT  | TCAAAACAAT  | GACTACAGCC  | CGGGGGAGGC |
| 14461 | AAGCACACAG | ACCATCAATC  | TTGACGACCG  | GTCGCACTGG  | GGCGGCGACC  | TGAAAACCAT |
| 14521 | CCTGCATACC | AACATGCCAA  | ATGTGAACGA  | GTTTCATGTTT | ACCAATAAGT  | TTAAGGCGCG |
| 14581 | GGTGATGGTG | TCGCGCTCGC  | TTACTAAGGA  | CAAACAGGTG  | GAGCTGAAAT  | ACGAGTGGGT |
| 14641 | GGAGTTCACG | CTGCCCCGAGG | GCAACTACTC  | CGAGACCATG  | ACCATAGACC  | TTATGAACAA |
| 14701 | CGCGATCGTG | GAGCACTACT  | TGAAAGTGGG  | CAGGCAGAAC  | GGGGTTCTGG  | AAAGCGACAT |
| 14761 | CGGGGTAAAG | TTTGACACCC  | GCAACTTCAG  | ACTGGGGTTT  | GACCCAGTCA  | CTGGTCTTGT |
| 14821 | CATGCCTGGG | GTATATACAA  | ACGAAGCCTT  | CCATCCAGAC  | ATCATTTTGC  | TGCCAGGATG |
| 14881 | CGGGGTGGAC | TTCACCCACA  | GCCGCCTGAG  | CAACTTGTTG  | GGCATCCGCA  | AGCGGCAACC |
| 14941 | CTTCCAGGAG | GGCTTTAGGA  | TCACCTACGA  | TGACCTGGAG  | GGTGGTAACA  | TTCCCGCACT |
| 15001 | GTTGGATGTG | GACGCCTACC  | AGGCAAGCTT  | GAAAGATGAC  | ACCGAACAGG  | GCGGGGGTGG |
| 15061 | CGCAGGCGGC | GGCAACAACA  | GTGGCAGCGG  | CGCGGAAGAG  | AACTCCAACG  | CGGCAGCTGC |
| 15121 | GGCAATGCAG | CCGGTGGAGG  | ACATGAACGA  | TCATGCCATT  | CGCGGCGACA  | CCTTTGCCAC |
| 15181 | ACGGGCGGAG | GAGAAGCGCG  | CTGAGGCCGA  | GGCAGCGGCC  | GAAGCTGCCG  | CCCCCGCTGC |
| 15241 | GGAGGCTGCA | CAACCCGAGG  | TCGAGAAGCC  | TCAGAAGAAA  | CCGGTGATTA  | AACCCCTGAC |
| 15301 | AGAGGACAGC | AAGAAACGCA  | GTTACAACCT  | AATAAGCAAT  | GACAGCACCT  | TCACCCAGTA |
| 15361 | CCGCAGCTGG | TACCTTGCAAT | ACAACCTACG  | CGACCCCTCAG | GCCGGGATCC  | GCTCATGGAC |
| 15421 | CCTGCTTTGC | ACTCCTGACG  | TAACCTGCGG  | CTCGGAGCAG  | GTATACTGGT  | CGTTGCCCGA |

FIG. 17A-6

|       |            |            |             |            |            |            |
|-------|------------|------------|-------------|------------|------------|------------|
| 15481 | CATGATGCAA | GACCCCGTGA | CCTTCCGCTC  | CACGCGCCAG | ATCAGCAACT | TTCCGGTGGT |
| 15541 | GGGCGCCGAG | CTGTTGCCCG | TGCACTCCAA  | GAGCTTCTAC | AACGACCAGG | CCGTCTACTC |
| 15601 | CCAGCTCATC | CGCCAGTTTA | CCTCTCTGAC  | CCACGTGTTC | AATCGCTTTC | CCGAGAACCA |
| 15661 | GATTTTGGCG | CGCCCGCCAG | CCCCCACCAT  | CACCACCGTC | AGTGAAAACG | TTCTTGCTCT |
| 15721 | CACAGATCAC | GGGACGCTAC | CGCTGCGCAA  | CAGCATCGGA | GGAGTCCAGC | GAGTGACCAT |
| 15781 | TACTGACGCC | AGACGCCGCA | CCTGCCCCCTA | CGTTTACAAG | GCCCTGGGCA | TAGTCTCGCC |
| 15841 | GCGCGTCCTA | TCGAGCCGCA | CTTTTTGAGC  | AAGCATGTCC | ATCCTTATAT | CGCCCAGCAA |
| 15901 | TAACACAGGC | TGGGGCCTGC | GCTTCCCAAG  | CAAGATGTTT | GGCGGGGCCA | AGAAGCGCTC |
| 15961 | CGACCAACAC | CCAGTGCGCG | TGCGCGGGCA  | CTACCGCGCG | CCCTGGGGCG | CGCACAAACG |
| 16021 | CGGCCGCACT | GGGCGCACCA | CCGTCGATGA  | CGCCATCGAC | GCGGTGGTGG | AGGAGGCGCG |
| 16081 | CAACTACACG | CCCACGCCGC | CGCCAGTGTC  | CACCGTGGAC | GCGGCCATTC | AGACCGTGGT |
| 16141 | GCGCGGAGCC | CGGCGCTACG | CTAAAATGAA  | GAGACGGCGG | AGGCGCGTAG | CACGTGCGCA |
| 16201 | CCGCCGCCGA | CCCGGCACTG | CCGCCCAACG  | CGCGGCGGCG | GCCCTGCTTA | ACCGCGCACG |
| 16261 | TCGCACCGGC | CGACGGGCGG | CCATGCGAGC  | CGCTCGAAGG | CTGGCCGCGG | GTATTGTCAC |
| 16321 | TGTGCCCCCC | AGGTCCAGGC | GACGAGCGGC  | CGCCGCAGCA | GCCGCGGCCA | TTAGTGCTAT |
| 16381 | GACTCAGGGT | CGCAGGGGCA | ACGTGTACTG  | GGTGCGCGAC | TCGGTTAGCG | GCCTGCGCGT |
| 16441 | GCCCGTGCGC | ACCCGCCCCC | CGCGCAACTA  | GATTGCAATA | AAAAACTACT | TAGACTCGTA |
| 16501 | CTGTTGTATG | TATCCAGCGG | CGGCGGCGCG  | CATCGAAGCT | ATGTCCAAGC | GCAAAATCAA |
| 16561 | AGAAGAGATG | CTCCAGGTCA | TCGCGCCGGA  | GATCTATGGC | CCCCGAAGA  | AGGAAGAGCA |
| 16621 | GGATTACAAG | CCCCGAAAGC | TAAAGCGGGT  | CAAAAAGAAA | AAGAAAGATG | ATGATGATGA |
| 16681 | TGAACTTGAC | GACGAGGTGG | AACTGTTGCA  | CGCGACCGCG | CCCAGGCGAC | GGGTACAGTG |
| 16741 | GAAAGGTCGA | CGCGTAAGAC | GTGTTTTGCG  | ACCCGGCACC | ACCGTAGTCT | TTACGCCCGG |
| 16801 | TGAGCGCTCC | ACCCGCACCT | ACAAGCGCGT  | GTATGATGAG | GTGTACGGCG | ACGAGGACCT |
| 16861 | GCTTGAGCAG | GCCAACGAGC | GCCTCGGGGA  | GTTTGCCTAC | GGAAAGCGGC | ATAAGGACAT |
| 16921 | GCTGGCGTTG | CCGCTGGACG | AGGGCAACCC  | AACACCTAGC | CTAAAGCCCG | TGACACTGCA |
| 16981 | GCAGGTGCTG | CCGCGCCTTG | CACCGTCCGA  | AGAAAAGCGC | GGCCTAAAGC | GCGAGTCTGG |
| 17041 | TGACTTGGCA | CCCACCGTGC | AGCTGATGGT  | ACCCAAGCGT | CAGCGACTGG | AAGATGTCTT |
| 17101 | GGAAAAAATG | ACCGTGGAGC | CTGGGCTGGA  | GCCCGAGGTC | CGCGTGCGGC | CAATCAAGCA |
| 17161 | GGTGGCACCG | GGACTGGGCG | TGCAGACCGT  | GGACGTTTAC | ATACCCACCA | CCAGTAGCAC |
| 17221 | TAGTATTGCC | ACTGCCACAG | AGGGCATGGA  | GACACAAACG | TCCCCGGTTG | CCTCGGCGGT |
| 17281 | GGCAGATGCC | GCGGTGCAGG | CGGCCGCTGC  | GGCCGCGTCC | AAGACCTCTA | CGGAGGTGCA |
| 17341 | AACGGACCCG | TGGATGTTTC | GTGTTTCAGC  | CCCCCGGCGT | CCGCGCCGTT | CAAGGAAGTA |
| 17401 | CGGCGCCGCC | AGCGCGCTAC | TGCCCGAATA  | TGCCCTACAT | CCTTCCATCG | CGCCTACCCC |
| 17461 | CGGCTATCGT | GGCTACACCT | ACCGCCCCAG  | AAGACGAGCA | ACTACCCGAC | GCCGAACCAC |
| 17521 | CACTGGAACC | CGCCGCCGCC | GTCGCCGTCG  | CCAGCCCGTG | CTGGCCCCGA | TTTCCGTGCG |
| 17581 | CAGGGTGGCT | CGCGAAGGAG | GCAGGACCCT  | GGTGCTGCCA | ACAGCGCGCT | ACCACCCAG  |
| 17641 | CATCGTTTAA | AAGCCGGTCT | TTGTGGTTCT  | TGCAGATATG | GCCCTCACCT | GCCGCCTCCG |
| 17701 | TTTCCCGGTG | CCGGGATTCC | GAGGAAGAAT  | GCACCGTAGG | AGGGGCATGG | CCGGCCACGG |
| 17761 | CCTGACGGGC | GGCATGCGTC | GTGCGCACCA  | CCGGCGGCGG | CGCGCGTCGC | ACCGTCGCAT |
| 17821 | GCGCGGCGGT | ATCCTGCCCC | TCCTTATTCC  | ACTGATCGCC | GCGGCGATTG | GCGCCGTGCC |
| 17881 | CGGAATTGCA | TCCGTGGCCT | TGCAGGCGCA  | GAGACACTGA | TTAAAAACAA | GTTACATGTG |
| 17941 | GAAAAATCAA | AATAAAAGTC | TGGACTCTCA  | CGCTCGCTTG | GTCCTGTAAC | TATTTTGTAG |
| 18001 | AATGGAAGAC | ATCAACTTTG | CGTCACTGGC  | CCGCGGACAC | GGCTCGCGCC | CGTTCATGGG |

FIG. 17A-7

|       |            |            |            |            |             |             |
|-------|------------|------------|------------|------------|-------------|-------------|
| 18061 | AAACTGGCAA | GATATCGGCA | CCAGCAATAT | GAGCGGTGGC | GCCTTCAGCT  | GGGGCTCGCT  |
| 18121 | GTGGAGCGGC | ATTAAAAATT | TCGGTTCCGC | CGTTAAGAAC | TATGGCAGCA  | AAGCCTGGAA  |
| 18181 | CAGCAGCACA | GGCCAGATGC | TGAGGGACAA | GTTGAAAGAG | CAAAATTTCC  | AACAAAAGGT  |
| 18241 | GGTAGATGGC | CTGGCCTCTG | GCATTAGCGG | GGTGGTGGAC | CTGGCCAACC  | AGGCAGTGCA  |
| 18301 | AAATAAGATT | AACAGTAAGC | TTGATCCCCG | CCCTCCCGTA | GAGGAGCCTC  | CACCGGCCGT  |
| 18361 | GGAGACAGTG | TCTCCAGAGG | GGCGTGGCGA | AAAGCGTCCG | CGACCCGACA  | GGGAAGAAAC  |
| 18421 | TCTGGTGACG | CAAATAGACG | AGCCTCCCTC | GTACGAGGAG | GCACTAAAGC  | AAGGCCTGCC  |
| 18481 | CACCACCCGT | CCCATCGCGC | CCATGGCTAC | CGGAGTGCTG | GGCCAGCACA  | CACCCGTAAAC |
| 18541 | GCTGGACCTG | CCTCCCCCCG | CCGACACCCA | GCAGAAACCT | GTGCTGCCAG  | GCCCGTCCGC  |
| 18601 | CGTTGTTGTA | ACCCGTCTTA | GCCGCGCGTC | CCTGCGCCGC | GCCGCCAGCG  | GTCCGCGATC  |
| 18661 | GTTGCGGCCC | GTAGCCAGTG | GCAACTGGCA | AAGCACACTG | AACAGCATCG  | TGGGTTTGGG  |
| 18721 | GGTGCAATCC | CTGAAGCGCC | GACGATGCTT | CTGATAGCTA | ACGTGTCGTA  | TGTGTGTCAT  |
| 18781 | GTATGCGTCC | ATGTCGCCGC | CAGAGGAGCT | GCTGAGCCGC | CGCGCGCCCG  | CTTTCCAAGA  |
| 18841 | TGGCTACCCC | TTCGATGATG | CCGCAGTGGT | CTTACATGCA | CATCTCGGGC  | CAGGACGCCT  |
| 18901 | CGGAGTACCT | GAGCCCCGGG | CTGGTGCAGT | TCGCCCGCGC | CACCGAGACG  | TACTTCAGCC  |
| 18961 | TGAATAACAA | GTTTAGAAAC | CCCACGGTGG | CGCCTACGCA | CGACGTGACC  | ACAGACCGGT  |
| 19021 | CTCAGCGTTT | GACGCTGCGG | TTCATCCCCG | TGGACCGCGA | GGATACTGCG  | TACTCGTACA  |
| 19081 | AGGCGCGGTT | CACCCTAGCT | GTGGGTGATA | ACCGTGTGCT | AGACATGGCT  | TCCACGTACT  |
| 19141 | TTGACATCCG | CGGCGTGCTG | GACAGGGGCC | CTACTTTTAA | GCCCTACTCT  | GGCACTGCCT  |
| 19201 | ACAACGCACT | GGCCCCCAAG | GGTGCCCCCA | ACTCGTGCGA | GTGGGAACAA  | AATGAAACTG  |
| 19261 | CACAAGTGGA | TGCTCAAGAA | CTTGACGAAG | AGGAGAATGA | AGCCAATGAA  | GCTCAGGCGC  |
| 19321 | GAGAACAGGA | ACAAGCTAAG | AAAACCCATG | TATATGCCCA | GGCTCCACTG  | TCCGGAATAA  |
| 19381 | AAATAACTAA | AGAAGGTCTA | CAAATAGGAA | CTGCCGACGC | CACAGTAGCA  | GGTGCCGGCA  |
| 19441 | AAGAAATTTT | CGCAGACAAA | ACTTTTCAAC | CTGAACCACA | AGTAGGAGAA  | TCTCAATGGA  |
| 19501 | ACGAAGCGGA | TGCCACAGCA | GCTGGTGGAA | GGGTCTTTAA | AAAGACAACCT | CCCATGAAAC  |
| 19561 | CCTGCTATGG | CTCATAACGT | AGACCCACCA | ATTCCAACGG | CGGACAGGGC  | GTTATGGTTG  |
| 19621 | AACAAAATGG | TAAATTGGAA | AGTCAAGTCG | AAATGCAATT | TTTTTCCACA  | TCCACAAATG  |
| 19681 | CCACAAATGA | AGTTAACAAT | ATACAACCAA | CAGTTGTATT | GTACAGCGAA  | GATGTAAACA  |
| 19741 | TGGAAACTCC | AGATACTCAT | CTTTCTTATA | AACCTAAAAT | GGGGGATAAA  | AATGCCAAAG  |
| 19801 | TCATGCTTGG | ACAACAAGCA | ATGCCAAACA | GACCAAATTA | CATTGCTTTT  | AGAGACAATT  |
| 19861 | TTATTGGTCT | CATGTATTAC | AACAGCACAG | GTAACATGGG | TGTCCTTGCT  | GGTCAGGCAT  |
| 19921 | CGCAGTTGAA | CGCTGTTGTA | GATTTGCAAG | ACAGAAACAC | AGAGCTGTCC  | TACCAGCTTT  |
| 19981 | TGCTTGATTC | AATTGGCGAC | AGAACAAGAT | ACTTTTCAAT | GTGGAATCAA  | GCTGTTGACA  |
| 20041 | GCTATGATCC | AGATGTCAGA | ATTATTGAGA | ACCATGGAAC | TGAGGATGAG  | TTGCCAAATT  |
| 20101 | ATTGCTTTCC | TCTTGGTGGA | ATTGGGATTA | CTGACACTTT | TCAAGCTGTT  | AAAACAACCTG |
| 20161 | CTGCTAACGG | GGACCAAGGC | AATACTACCT | GGCAAAAAGA | TTCAACATTT  | GCAGAACGCA  |
| 20221 | ATGAAATAGG | GGTGGGAAAT | AACTTTGCCA | TGGAAATTAA | CCTGAATGCC  | AACCTATGGA  |
| 20281 | GAAATTTCTT | TACTCCAAT  | ATTGCGCTGT | ACCTGCCAGA | CAAGCTAAAA  | TACAACCCCA  |
| 20341 | CCAATGTGGA | AATATCTGAC | AACCCCAACA | CCTACGACTA | CATGAACAAG  | CGAGTGGTGG  |
| 20401 | CTCCTGGGCT | TGTAGACTGC | TACATTAACC | TTGGGGCGCG | CTGGTCTCTG  | GACTACATGG  |
| 20461 | ACAACGTAA  | TCCCTTTAAC | CACCACCGCA | ATGCGGGCCT | GCGTTACCGC  | TCCATGTTGT  |
| 20521 | TGGGAAACGG | CCGCTACGTG | CCCTTTCACA | TTCAGGTGCC | CCAAAAGTTT  | TTTGCCATTA  |
| 20581 | AAAACCTCCT | CCTCCTGCCA | GGCTCATACA | CATATGAATG | GAACCTCAGG  | AAGGATGTTA  |

FIG. 17A-8



|       |            |            |            |             |            |            |
|-------|------------|------------|------------|-------------|------------|------------|
| 20641 | ACATGGTTCT | GCAGAGCTCT | CTGGGAAACG | ACCTTAGAGT  | TGACGGGGCT | AGCATTAAGT |
| 20701 | TTGACAGCAT | TTGTCTTTAC | GCCACCTTCT | TCCCCATGGC  | CCACAACACG | GCCTCCACGC |
| 20761 | TGGAAGCCAT | GCTCAGAAAT | GACACCAACG | ACCAGTCCTT  | TAATGACTAC | CTTTCCGCCG |
| 20821 | CCAACATGCT | ATATCCCATA | CCCGCCAACG | CCACCAACGT  | GCCCATCTCC | ATCCCATCGC |
| 20881 | GCAACTGGGC | AGCATTTTCG | GGTTGGGCCT | TCACACGCTT  | GAAGACAAAG | GAAACCCCTT |
| 20941 | CCCTGGGATC | AGGCTACGAC | CCTTACTACA | CCTACTCTGG  | CTCCATACCA | TACCTTGACG |
| 21001 | GAACCTTCTA | TCTTAATCAC | ACCTTTAAGA | AGGTGGCCAT  | TACTTTTGAC | TCTTCTGTTA |
| 21061 | GCTGGCCGGG | CAACGACCGC | CTGCTTACTC | CCAATGAGTT  | TGAGATTAAG | CGCTCAGTTG |
| 21121 | ACGGGGAGGG | CTATAACGTA | GCTCAGTGCA | ACATGACAAA  | GGACTGGTTC | CTAGTGCAGA |
| 21181 | TGTTGGCCAA | CTACAATATT | GGCTACCAGG | GCTTCTACAT  | TCCAGAAAGC | TACAAAGACC |
| 21241 | GCATGTACTC | GTTCTTCAGA | AACTTCCAGC | CCATGAGCCG  | GCAAGTGGTG | GACGATACTA |
| 21301 | AATACAAAGA | TTATCAGCAG | GTTGGAATTA | TCCACCAGCA  | TAACAACTCA | GGCTTCGTAG |
| 21361 | GCTACCTCGC | TCCCACCATG | CGCGAGGGAC | AAGCTTACCC  | CGCTAATGTT | CCCTACCCAC |
| 21421 | TAATAGGCAA | AACCGCGGTT | GATAGTATTA | CCCAGAAAAA  | GTTTCTTTGC | GACCGCACCC |
| 21481 | TGTGGCGCAT | CCCCTTCTCC | AGTAACTTTA | TGTCCATGGG  | TGCGCTCACA | GACCTGGGCC |
| 21541 | AAAACCTTCT | CTACGCAAAC | TCCGCCACG  | CGCTAGACAT  | GACCTTTGAG | GTGGATCCCA |
| 21601 | TGGACGAGCC | CACCCTTCTT | TATGTTTTGT | TTGAAGTCTT  | TGACGTGGTC | CGTGTGCACC |
| 21661 | AGCCGCACCG | CGGCGTCATC | GAGACCGTGT | ACCTGCGCAC  | GCCCTTCTCG | GCCGGCAACG |
| 21721 | CCACAACATA | AAGAAGCAAG | CAACATCAAC | AACAGCTGCC  | GCCATGGGCT | CCAGTGAGCA |
| 21781 | GGAAGTGAAG | GCCATTGTCA | AAGATCTTGG | TTGTGGGCCA  | TATTTTTTGG | GCACCTATGA |
| 21841 | CAAGCGCTTC | CCAGGCTTTG | TTTCCCCACA | CAAGCTCGCC  | TGCGCCATAG | TTAACACGGC |
| 21901 | CGGTCGCGAG | ACTGGGGGCG | TACACTGGAT | GGCCTTTGCC  | TGGAACCCGC | GCTCAAAAAC |
| 21961 | ATGCTACCTC | TTTGAGCCCT | TTGGCTTTTC | TGACCAACGT  | CTCAAGCAGG | TTTACCAGTT |
| 22021 | TGAGTACGAG | TCACTCCTGC | GCCGTAGCGC | CATTGCCTCT  | TCCCCCGACC | GCTGTATAAC |
| 22081 | GCTGGAAAAG | TCCACCCAAA | GCGTGCAGGG | GCCCAACTCG  | GCCGCCTGTG | GCCTATTCTG |
| 22141 | CTGCATGTTT | CTCCACGCCT | TTGCCAACTG | GCCCCAAACT  | CCCATGGATC | ACAACCCAC  |
| 22201 | CATGAACCTT | ATTACCGGGG | TACCCAACTC | CATGCTTAAC  | AGTCCCCAGG | TACAGCCCAC |
| 22261 | CCTGCGCCGC | AACCAGGAAC | AGCTCTACAG | CTTCCTGGAG  | CGCCACTCGC | CCTACTTCCG |
| 22321 | CAGCCACAGT | GCGCAAATTA | GGAGCGCCAC | TTCTTTTTGT  | CACTTGAAAA | ACATGTAAAA |
| 22381 | ATAATGTACT | AGGAGACACT | TTCAATAAAG | GCAAATGTTT  | TTATTTGTAC | ACTCTCGGGT |
| 22441 | GATTATTTAC | CCCCACCCTT | GCCGTCTGCG | CCGTTTAAAA  | ATCAAAGGGG | TTCTGCCGCG |
| 22501 | CATCGCTATG | CGCCACTGGC | AGGGACACGT | TGCGATACTG  | GTGTTTAGTG | CTCCACTTAA |
| 22561 | ACTCAGGCAC | AACCATCCGC | GGCAGCTCGG | TGAAGTTTTT  | ACTCCACAGG | CTGCGCACCA |
| 22621 | TCACCAACGC | GTTTAGCAGG | TCGGGCGCCG | ATATCTTGAA  | GTCGCAGTTG | GGGCCTCCGC |
| 22681 | CCTGCGCGCG | CGAGTTGCGA | TACACAGGGT | TACAGCACTG  | GAACACTATC | AGCGCCGGGT |
| 22741 | GGTGCACGCT | GGCCAGCACG | CTCTTGTCGG | AGATCAGATC  | CGCGTCCAGG | TCCTCCGCGT |
| 22801 | TGCTCAGGGC | GAACGGAGTC | AACTTTGGTA | GCTGCCTTCC  | CAAAAAGGGT | GCATGCCCAG |
| 22861 | GCTTTGAGTT | GCACTCGCAC | CGTAGTGGCA | TCAGAAGGTG  | ACCGTGCCCA | GTCTGGGCGT |
| 22921 | TAGGATACAG | CGCCTGCATG | AAAGCCTTGA | TCTGCTTAAA  | AGCCACCTGA | GCCTTTGCGC |
| 22981 | CTTCAGAGAA | GAACATGCCG | CAAGACTTGC | CGGAAAACCTG | ATTGGCCGGA | CAGGCCGCGT |
| 23041 | CATGCACGCA | GCACCTTGCG | TCGGTGTGGG | AGATCTGCAC  | CACATTTTCG | CCCCACCGGT |
| 23101 | TCTTCACGAT | CTTGGCCTTG | CTAGACTGCT | CCTTCAGCGC  | GCGCTGCCCG | TTTTCGCTCG |
| 23161 | TCACATCCAT | TTCAATCACG | TGCTCCTTAT | TTATCATAAT  | GCTCCCGTGT | AGACACTTAA |

FIG. 17A-9



|       |            |            |            |            |             |             |
|-------|------------|------------|------------|------------|-------------|-------------|
| 23221 | GCTCGCCTTC | GATCTCAGCG | CAGCGGTGCA | GCCACAACGC | GCAGCCCGTG  | GGCTCGTGGT  |
| 23281 | GCTTGTAGGT | TACCTCTGCA | AACGACTGCA | GGTACGCCTG | CAGGAATCGC  | CCCATCATCG  |
| 23341 | TCACAAAGGT | CTTGTTGCTG | GTGAAGGTCA | GCTGCAACCC | GCGGTGCTCC  | TCGTTTAGCC  |
| 23401 | AGGTCTTGCA | TACGGCCGCC | AGAGCTTCCA | CTTGGTCAGG | CAGTAGCTTG  | AAGTTTGCC   |
| 23461 | TTAGATCGTT | ATCCACGTGG | TACTTGTCCA | TCAACGCGCG | CGCAGCCTCC  | ATGCCCTTCT  |
| 23521 | CCCACGCAGA | CACGATCGGC | AGGCTCAGCG | GGTTTATCAC | CGTGCTTTCA  | CTTTCCGCTT  |
| 23581 | CACTGGACTC | TTCCTTTTCC | TCTTGCATCC | GCATACCCCG | CGCCACTGGG  | TCGTCTTCAT  |
| 23641 | TCAGCCGCCG | CACCGTGCGC | TTACCTCCCT | TGCCGTGCTT | GATTAGCACC  | GGTGGGTTGC  |
| 23701 | TGAAACCCAC | CATTTGTAGC | GCCACATCTT | CTCTTTCTTC | CTCGCTGTCC  | ACGATCACCT  |
| 23761 | CTGGGGATGG | CGGGCGCTCG | GGCTTGGGAG | AGGGGCGCTT | CTTTTCTTTT  | TTGGACGCAA  |
| 23821 | TGGCCAAATC | CGCCGTCGAG | GTCGATGGCC | GCGGGCTGGG | TGTGCGCGGC  | ACCAGCGCAT  |
| 23881 | CTTGTGACGA | GTCTTCTTCG | TCCTCGGACT | CGAGACGCCG | CCTCAGCCGC  | TTTTTTGGGG  |
| 23941 | GCGCGCGGGG | AGGCGGCGGC | GACGGCGACG | GGGACGAGAC | GTCCTCCATG  | GTTGGTGGAC  |
| 24001 | GTCGCGCCGC | ACCGCGTCCG | CGCTCGGGGG | TGGTTTCGCG | CTGCTCCTCT  | TCCCGACTGG  |
| 24061 | CCATTTCCCT | CTCCTATAGG | CAGAAAAAGA | TCATGGAGTC | AGTCGAGAAG  | GAGGACAGCC  |
| 24121 | TAACCGCCCC | CTTTGAGTTC | GCCACCACCG | CCTCCACCGA | TGCCGCCAAC  | GCGCCTACCA  |
| 24181 | CCTTCCCCGT | CGAGGCACCC | CCGCTTGAGG | AGGAGGAAGT | GATTATCGAG  | CAGGACCCAG  |
| 24241 | GTTTTGTAAG | CGAAGACGAC | GAAGATCGCT | CAGTACCAAC | AGAGGATAAA  | AAGCAAGACC  |
| 24301 | AGGACGACGC | AGAGGCAAAC | GAGGAACAAG | TCGGGCGGGG | GGACCAAAGG  | CATGGCGACT  |
| 24361 | ACCTAGATGT | GGGAGACGAC | GTGCTGTTGA | AGCATCTGCA | GCGCCAGTGC  | GCCATTATCT  |
| 24421 | GCGACGCGTT | GCAAGAGCGC | AGCGATGTGC | CCCTCGCCAT | AGCGGATGTC  | AGCCTTGCC   |
| 24481 | ACGAACGCCA | CCTGTTCTCA | CCGCGCGTAC | CCCCCAAACG | CCAAGAAAAC  | GGCACATGCG  |
| 24541 | AGCCCAACCC | GCGCCTCAAC | TTCTACCCCG | TATTTGCCGT | GCCAGAGGTG  | CTTGCCACCT  |
| 24601 | ATCACATCTT | TTTCCAAAAC | TGCAAGATAC | CCCTATCCTG | CCGTGCCAAC  | CGCAGCCGAG  |
| 24661 | CGGACAAGCA | GCTGGCCTTG | CGGCAGGGCG | CTGTCATACC | TGATATCGCC  | TCGCTCGACG  |
| 24721 | AAGTGCCAAA | AATCTTTGAG | GGTCTTGGAC | GCGACGAGAA | GCGCGCGGCA  | AACGCTCTGC  |
| 24781 | AACAAGAAAA | CAGCGAAAAT | GAAAGTCACT | GTGGAGTGCT | GGTGGAACCT  | GAGGGTGACA  |
| 24841 | ACGCGCGCCT | AGCCGTGCTG | AAACGCAGCA | TCGAGGTCAC | CCACTTTGCC  | TACCCGGCAC  |
| 24901 | TTAACCTACC | CCCCAAGGTT | ATGAGCACAG | TCATGAGCGA | GCTGATCGTG  | CGCCGTGCAC  |
| 24961 | GACCCCTGGA | GAGGGATGCA | AACTTGCAAG | AACAAACCGA | GGAGGGCCTA  | CCCGCAGTTG  |
| 25021 | GCGATGAGCA | GCTGGCGCGC | TGGCTTGAGA | CGCGCGAGCC | TGCCGACTTG  | GAGGAGCGAC  |
| 25081 | GCAAGCTAAT | GATGGCCGCA | GTGCTTGTTA | CCGTGGAGCT | TGAGTG CATG | CAGCGGTTCT  |
| 25141 | TTGCTGACCC | GGAGATGCAG | CGCAAGCTAG | AGGAAACGTT | GCACTACACC  | TTTCGCCAGG  |
| 25201 | GCTACGTGCG | CCAGGCCTGC | AAAATTTCCA | ACGTGGAGCT | CTGCAACCTG  | GTCTCCTACC  |
| 25261 | TTGGAATTTT | GCACGAAAAC | CGCCTTGGGC | AAAACGTGCT | TCATTCCACG  | CTCAAGGGCG  |
| 25321 | AGGCGCGCCG | CGACTACGTC | CGCGACTGCG | TTTACTTATT | TCTGTGCTAC  | ACCTGGCAAA  |
| 25381 | CGGCCATGGG | CGTGTGGCAG | CAGTGCCTGG | AGGAGCGCAA | CCTGAAGGAG  | CTGCAGAAGC  |
| 25441 | TGCTAAAGCA | AAACTTGAAG | GACCTATGGA | CGGCCTTCAA | CGAGCGCTCC  | GTGGCCGCGC  |
| 25501 | ACCTGGCGGA | CATTATCTTC | CCCGAACGCC | TGCTTAAAAC | CCTGCAACAG  | GGTCTGCCAG  |
| 25561 | ACTTCACCAG | TCAAAGCATG | TTGCAAAACT | TTAGGAACTT | TATCCTAGAG  | CGTTCAGGAA  |
| 25621 | TTCTGCCCCG | CACCTGCTGT | GCGCTTCCTA | GCGACTTTGT | GCCCATTAAG  | TACCGTGAAT  |
| 25681 | GCCCTCCGCC | GCTTTGGGGT | CACTGCTACC | TTCTGCAGCT | AGCCAACTAC  | CTTGCCCTACC |
| 25741 | ACTCCGACAT | CATGGAAGAC | GTGAGCGGTG | ACGGCCTACT | GGAGTGTCAC  | TGTCGCTGCA  |

FIG. 17A-10

|       |             |             |            |             |            |            |
|-------|-------------|-------------|------------|-------------|------------|------------|
| 25801 | ACCTATGCAC  | CCCGCACCGC  | TCCCTGGTCT | GCAATTCACA  | ACTGCTTAGC | GAAAGTCAAA |
| 25861 | TTATCGGTAC  | CTTTGAGCTG  | CAGGGTCCCT | CGCCTGACGA  | AAAGTCCGCG | GCTCCGGGGT |
| 25921 | TGAAACTCAC  | TCCGGGGCTG  | TGGACGTCGG | CTTACCTTCG  | CAAATTTGTA | CCTGAGGACT |
| 25981 | ACCACGCCCCA | CGAGATTAGG  | TTCTACGAAG | ACCAATCCCCG | CCCGCCAAAT | GCGGAGCTTA |
| 26041 | CCGCCTGCGT  | CATTACCCAG  | GGCCACATCC | TTGGCCAATT  | GCAAGCCATT | AACAAAGCCC |
| 26101 | GCCAAGAGTT  | TCTGCTACGA  | AAGGGACGGG | GGGTTTACTT  | GGACCCCCAG | TCCGGCGAGG |
| 26161 | AGCTCAACCC  | AATCCCCCG   | CCGCCGCAGC | CCTATCAGCA  | GCCGCGGGCC | CTTGCTTCCC |
| 26221 | AGGATGGCAC  | CCAAAAAGAA  | GCTGCAGCTG | CCGCCGCCGC  | CACCCACGGA | CGAGGAGGAA |
| 26281 | TACTGGGACA  | GTCAGGCAGA  | GGAGGTTTTG | GACGAGGAGG  | AGGAGATGAT | GGAAGACTGG |
| 26341 | GACAGCCTAG  | ACGAGGAAGC  | TTCCGAGGCC | GAAGAGGTGT  | CAGACGAAAC | ACCGTCACCC |
| 26401 | TCGGTCGCAT  | TCCCCTCGCC  | GGCGCCCCAG | AAATCGGCAA  | CCGTTCCCAG | CATTGCTACA |
| 26461 | ACCTCCGCTC  | CTCAGGCGCC  | GCCGGCACTG | CCCGTTCGCC  | GACCCAACCG | TAGATGGGAC |
| 26521 | ACCACTGGAA  | CCAGGGCCGG  | TAAGTCTAAG | CAGCCGCCGC  | CGTTAGCCCA | AGAGCAACAA |
| 26581 | CAGCGCCAAG  | GCTACCGCTC  | GTGGCGCGTG | CACAAGAACG  | CCATAGTTGC | TTGCTTGCAA |
| 26641 | GACTGTGGGG  | GCAACATCTC  | CTTCGCCCGC | CGCTTTCTTC  | TCTACCATCA | CGGCGTGGCC |
| 26701 | TTCCCCCGTA  | ACATCCTGCA  | TTACTACCGT | CATCTCTACA  | GCCCCTACTG | CACCGGCGGC |
| 26761 | AGCGGCAGCA  | ACAGCAGCGG  | CCACGCAGAA | GCAAAGGCGA  | CCGGATAGCA | AGACTCTGAC |
| 26821 | AAAGCCCAAG  | AAATCCACAG  | CGGCGGCAGC | AGCAGGAGGA  | GGAGCACTGC | GTCTGGCGCC |
| 26881 | CAACGAACCC  | GTATCGACCC  | GCGAGCTTAG | AAACAGGATT  | TTTCCCCTC  | TGTATGCTAT |
| 26941 | ATTTCAACAG  | AGCAGGGGCC  | AAGAACAAGA | GCTGAAAATA  | AAAAACAGGT | CTCTGCGCTC |
| 27001 | CCTCACCCGC  | AGCTGCCTGT  | ATCACAAAAG | CGAAGATCAG  | CTTCGGCGCA | CGCTGGAAGA |
| 27061 | CGCGGAGGCT  | CTCTTCAGCA  | AATACTGCGC | GCTGACTCTT  | AAGGACTAGT | TTGCGGCCCT |
| 27121 | TTCTCAAATT  | TAAGCGCGAA  | AACTACGTCA | TCTCCAGCGG  | CCACACCCGG | CGCCAGCACC |
| 27181 | TGTCGTCAGC  | GCCATTATGA  | GCAAGGAAAT | TCCCACGCC   | TACATGTGGA | GTTACCAGCC |
| 27241 | ACAAATGGGA  | CTTGCGGCTG  | GAGCTGCCCA | AGACTACTCA  | ACCCGAATAA | ACTACATGAG |
| 27301 | CGCGGGACCC  | CACATGATAT  | CCCGGGTCAA | CGGAATCCGC  | GCCCACCGAA | ACCGAATTCT |
| 27361 | CCTCGAACAG  | GCGGCTATTA  | CCACCACACC | TCGTAATAAC  | CTTAATCCCC | GTAGTTGGCC |
| 27421 | CGCTGCCCTG  | GTGTACCAGG  | AAAGTCCC   | TCCCACCACT  | GTGGTACTTC | CCAGAGACGC |
| 27481 | CCAGGCCGAA  | G TTCAGATGA | CTAACTCAGG | GGCGCAGCTT  | GCGGGCGGCT | TTCGTCACAG |
| 27541 | GGTGCGGTCG  | CCCGGGCAGG  | GTATAACTCA | CCTGAAAATC  | AGAGGGCGAG | GTATTCAGCT |
| 27601 | CAACGACGAG  | TCGGTGAGCT  | CCTCTCTTGG | TCTCCGTCCG  | GACGGGACAT | TTCAGATCGG |
| 27661 | CGGCGCTGGC  | CGCTCTTCAT  | TTACGCCCCG | TCAGGCGATC  | CTAACTCTGC | AGACCTCGTC |
| 27721 | CTCGGAGCCG  | CGCTCCGGAG  | GCATTGGAAC | TCTACAATTT  | ATTGAGGAGT | TCGTGCCTTC |
| 27781 | GGTTTACTTC  | AACCCCTTTT  | CTGGACCTCC | CGGCCACTAC  | CCGGACCAGT | TTATTCCCAA |
| 27841 | CTTTGACGCG  | GTAAAAGACT  | CGGCGGACGG | CTACGACTGA  | ATGACCAGTG | GAGAGGCAGA |
| 27901 | GCAACTGCGC  | CTGACACACC  | TCGACCACTG | CCGCCGCCAC  | AAGTGCTTTG | CCCGCGGCTC |
| 27961 | CGGTGAGTTT  | TGTTACTTTG  | AATTGCCCGA | AGAGCATATC  | GAGGGCCCGG | CGCACGGCGT |
| 28021 | CCGGCTCACC  | ACCCAGGTAG  | AGCTTACACG | TAGCCTGATT  | CGGGAGTTTA | CCAAGCGCCC |
| 28081 | CCTGCTAGTG  | GAGCGGGAGC  | GGGGTCCCTG | TGTTCTGACC  | GTGGTTTGCA | ACTGTCCTAA |
| 28141 | CCCTGGATTA  | CATCAAGATC  | TTTGTTGTCA | TCTCTGTGCT  | GAGTATAATA | AATACAGAAA |
| 28201 | TTAGAATCTA  | CTGGGGCTCC  | TGTCGCCATC | CTGTGAACGC  | CACCGTTTTT | ACCCACCCAA |
| 28261 | AGCAGACCAA  | AGCAAACCTC  | ACCTCCGGTT | TGCACAAGCG  | GGCCAATAAG | TACCTTACCT |
| 28321 | GGTACTTTAA  | CGGCTCTTCA  | TTTGTAATTT | ACAACAGTTT  | CCAGCGAGAC | GAAGTAAGTT |

FIG. 17A-11

|       |            |             |            |            |            |             |
|-------|------------|-------------|------------|------------|------------|-------------|
| 28381 | TGCCACACAA | CCTTCTCGGC  | TTCAACTACA | CCGTCAAGAA | AAACACCACC | ACCACCCTCC  |
| 28441 | TCACCTGCCG | GGAACGTACG  | AGTGCCTCAC | CGGTTGCTGC | GCCCACACCT | ACAGCCTGAG  |
| 28501 | CGTAACCAGA | CATTACTCCC  | ATTTTCCCAA | AACAGGAGGT | GAGCTCAACT | CCCGGAACTC  |
| 28561 | AGGTCAAAAA | AGCATTTTGC  | GGGGTGCTGG | GATTTTTTAA | TTAAGTATAT | GAGCAATTCA  |
| 28621 | AGTAACTCTA | CAAGCTTGTC  | TAATTTTCT  | GGAATTGGGG | TCGGGGTTAT | CCTTACTCTT  |
| 28681 | GTAATTCTGT | TTATTCTTAT  | ACTAGCACTT | CTGTGCCTTA | GGGTTGCCGC | CTGCTGCACG  |
| 28741 | CACGTTTGTA | CCTATTGTCA  | GCTTTTAA   | CGCTGGGGGC | GACATCCAAG | ATGAGGTACA  |
| 28801 | TGATTTTAGG | CTTGCTCGCC  | CTTGCGGCAG | TCTGCAGCGC | TGCCAAAAAG | GTTGAGTTTA  |
| 28861 | AGGAACCAGC | TTGCAATGTT  | ACATTTAAAT | CAGAAGCTAA | TGAATGCACT | ACTCTTATAA  |
| 28921 | AATGCACCAC | AGAACATGAA  | AAGCTTATTA | TTCCGCACAA | AGACAAAATT | GGCAAGTATG  |
| 28981 | CTGTATATGC | TATTTGGCAG  | CCAGGTGACA | CTAACGACTA | TAATGTCACA | GTCTTCCAAG  |
| 29041 | GTGAAAATCG | TAAAACTTTT  | ATGTATAAAT | TTCCATTTTA | TGAAATGTGC | GATATTACCA  |
| 29101 | TGTACATGAG | CAAACAGTAC  | AAGTTGTGGC | CCCCACAAAA | GTGTTTAGAG | AACACTGGCA  |
| 29161 | CCTTTTGTTT | CACCGCTCTG  | CTTATTACAG | CGCTTGCTTT | GGTATGTACC | TTACTTTATC  |
| 29221 | TCAAATACAA | AAGCAGACGC  | AGTTTATTAT | ATGAAAAGAA | AATGCCTTGA | TTTTCCGCTT  |
| 29281 | GCTTGTATTC | CCCTGGACAA  | TTTACTCTAT | GTGGGATATG | CGCCAGGCGG | GAAAGATTAT  |
| 29341 | ACCCACAACC | TTCAAATCAA  | ACTTTCCTGG | ACGTTAGCGC | CTGACTTCTG | CCAGCGCCTG  |
| 29401 | CACTGCAAAT | TTGATCAAAC  | CCAGCTTCAG | CTTGCCTGCT | CCAGAGATGA | CCGGCTCAAC  |
| 29461 | CATCGCGCCC | ACAACGGACT  | ATCGCAACAC | CACTGCTACC | GGACTAAAAT | CTGCCCTAAA  |
| 29521 | TTTACCCCAA | GTTTCATGCCT | TTGTCAATGA | CTGGGCGAGC | TTGGGCATGT | GGTGGTTTTT  |
| 29581 | CATAGCGCTT | ATGTTTGTTT  | GCCTTATTAT | TATGTGGCTT | ATTTGTTGCC | TAAAGCGCAG  |
| 29641 | ACGCGCCAGA | CCCCCATCT   | ATAGGCCTAT | CATTGTGCTC | AACCCACACA | ATGAAAAAAT  |
| 29701 | TCATAGATTG | GACGGTCTCA  | AACCATGTTC | TCTTCTTTTA | CAGTATGATT | AAATGAGACA  |
| 29761 | TGATTCCTCG | AGTCCTTATA  | TTATTGACCC | TTGTTGCGCT | TTTCTGTGCG | TGCTCTACAT  |
| 29821 | TGGCTGCGGT | CGCTCACATC  | GAAGTAGATT | GCATCCCACC | TTTCACAGTT | TACCTGCTTT  |
| 29881 | ACGGATTTGT | CACCCCTATC  | CTCATCTGCA | GCCTCGTCAC | TGTAGTCATC | GCCTTCATTC  |
| 29941 | AGTTCATTGA | CTGGATTTGT  | GTGCGCATTG | CGTACCTTAG | GCACCATCCG | CAATACAGAG  |
| 30001 | ACAGGACTAT | AGCTGATCTT  | CTCAGAATTC | TTTAATTATG | AAACGGATTG | TCACTTTTGT  |
| 30061 | TTTGCTGATT | TTCTGCGCCC  | TACCTGTGCT | TTGCTCCCAA | ACCTCAGCGC | CTCCCAAAG   |
| 30121 | ACATATTTCC | TGCAGATTCA  | CTCAAATATG | GAACATTCCC | AGCTGCTACA | ACAAACAGAG  |
| 30181 | CGATTTGTCA | GAAGCCTGGT  | TATACGCCAT | CATCTCTGTC | ATGGTTTTTT | GCAGTACCAT  |
| 30241 | TTTTGCCCTA | GCCATATACC  | CATACCTTGA | CATTGGTTGG | AATGCCATAG | ATGCCATGAA  |
| 30301 | CCACCCTACT | TTCCCAGCGC  | CCAATGTCAT | ACCACTGCAA | CAGGTTATTG | CCCCAATCAA  |
| 30361 | TCAGCCTCGC | CCCCCTTCTC  | CCACCCCCAC | TGAGATTAGC | TACTTTAATT | TGACAGGTGG  |
| 30421 | AGATGACTGA | ATCTCTAGAT  | CTAGAATTGG | ATGGAATTAA | CACCGAACAG | CGCCTACTAG  |
| 30481 | AAAGGCGCAA | GGCGGCGTCC  | GAGCGAGAAC | GCCTAAAACA | AGAAGTTGAA | GACATGGTTA  |
| 30541 | ACCTGCACCA | GTGTAAAAGA  | GGTATCTTTT | GTGTGGTCAA | GCAGGCCAAA | CTTACCTACG  |
| 30601 | AAAAAACCAC | TACCGGCAAC  | CGCCTTAGCT | ACAAGCTACC | CACCCAGCGC | CAAAAACCTGG |
| 30661 | TGCTTATGGT | GGGAGAAAAA  | CCTATCACCG | TCACCCAGCA | CTCGGCAGAA | ACAGAAGGCT  |
| 30721 | GCCTGCACTT | CCCCTATCAG  | GGTCCAGAGG | ACCTCTGCAC | TCTTATTAAA | ACCATGTGTG  |
| 30781 | GCATTAGAGA | TCTTATTCCA  | TTCAACTAAC | AATAAACACA | CAATAAATTA | CTTACTTAAA  |
| 30841 | ATCAGTCAGC | AAATCTTTGT  | CCAGCTTATT | CAGCATCACC | TCCTTTCCCT | CCTCCCAACT  |
| 30901 | CTGGTATTTT | AGCAGCCTTT  | TAGCTGCGAA | CTTCTCCAA  | AGTCTAAATG | GGATGTCAAA  |

FIG. 17A-12

|       |            |            |            |             |            |            |
|-------|------------|------------|------------|-------------|------------|------------|
| 30961 | TTCCTCATGT | TCTTGTCCCT | CCGCACCCAC | TATCTTCATA  | TTGTTGCAGA | TGAAACGCGC |
| 31021 | CAGACCGTCT | GAAGACACCT | TCAACCCTGT | GTACCCATAT  | GACACGGAAA | CCGGCCCTCC |
| 31081 | AACTGTGCCT | TTCCTTACCC | CTCCCTTTGT | GTCGCCAAAT  | GGGTTCCAAG | AAAGTCCCCC |
| 31141 | CGGAGTGCTT | TCTTTGCGTC | TTTCAGAACC | TTTGGTTACC  | TCACACGGCA | TGCTTGCGCT |
| 31201 | AAAAATGGGC | AGCGGCCTGT | CCCTGGATCA | GGCAGGCAAC  | CTTACATCAA | ATACAATCAC |
| 31261 | TGTTTCTCAA | CCGCTAAAAA | AAACAAAGTC | CAATATAACT  | TTGGAAACAT | CCGCGCCCCT |
| 31321 | TACAGTCAGC | TCAGGCGCCC | TAACCATGGC | CACAACTTCG  | CCTTTGGTGG | TCTCTGACAA |
| 31381 | CACTCTTACC | ATGCAATCAC | AAGCACCGCT | AACCGTGCAA  | GACTCAAAAC | TTAGCATTGC |
| 31441 | TACCAAAGAG | CCACTTACAG | TGTTAGATGG | AAAACCTGGC  | CTGCAGACAT | CAGCCCCCT  |
| 31501 | CTCTGCCACT | GATAACAACG | CCCTCACTAT | CACTGCCTCA  | CCTCCTCTTA | CTACTGCAAA |
| 31561 | TGGTAGTCTG | GCTGTTACCA | TGGAAAACCC | ACTTTACAAC  | AACAATGGAA | AACTTGGGCT |
| 31621 | CAAATTTGGC | GGTCCTTTGC | AAGTGGCCAC | CGACTCACAT  | GACTAACAC  | TAGGTACTGG |
| 31681 | TCAGGGGGTT | GCAGTTCATA | ACAATTTGCT | ACATACAAAA  | GTTACAGGCG | CAATAGGGTT |
| 31741 | TGATACATCT | GGCAACATGG | AACTTAAAAC | TGGAGATGGC  | CTCTATGTGG | ATAGCGCCGG |
| 31801 | TCCTAACCAA | AAACTACATA | TTAATCTAAA | TACCACAAAA  | GGCCTTGCTT | TTGACAACAC |
| 31861 | CGCAATAACA | ATTAACGCTG | GAAAAGGGTT | GGAATTTGAA  | ACAGACTCCT | CAAACGGAAA |
| 31921 | TCCCATAAAA | ACAAAAATTG | GATCAGGCAT | ACAATATAAT  | ACCAATGGAG | CTATGGTTGC |
| 31981 | AAAACCTGGA | ACAGGCCTCA | GTTTTGACAG | CTCCGGAGCC  | ATAACAATGG | GCAGCATAAA |
| 32041 | CAATGACAGA | CTTACTCTTT | GGACAACACC | AGACCCATCC  | CCAAATTGCA | GAATTGCTTC |
| 32101 | AGATAAAGAC | TGCAAGCTAA | CTCTGGCGCT | AACAAAATGT  | GGCAGTCAAA | TTTTGGGCAC |
| 32161 | TGTTTCAGCT | TTGGCAGTAT | CAGGTAATAT | GGCCTCCATC  | AATGGAACTC | TAAGCAGTGT |
| 32221 | AAACTTGGTT | CTTAGATTTG | ATGACAACGG | AGTGCTTATG  | TCAAATTCAT | CACTGGACAA |
| 32281 | ACAGTATTGG | AACTTTAGAA | ACGGGGACTC | CACTAACGGT  | CAACCATACA | CTTATGCTGT |
| 32341 | TGGGTTTATG | CCAAACCTAA | AAGCTTACCC | AAAAACTCAA  | AGTAAAACTG | CAAAAAGTAA |
| 32401 | TATTGTTAGC | CAGGTGTATC | TTAATGGTGA | CAAGTCTAAA  | CCATTGCATT | TTACTATTAC |
| 32461 | GCTAAATGGA | ACAGATGAAA | CCAACCAAGT | AAGCAAATAC  | TCAATATCAT | TCAGTTGGTC |
| 32521 | CTGGAACAGT | GGACAATACA | CTAATGACAA | ATTTGCCACC  | AATTCCTATA | CCTTCTCCTA |
| 32581 | CATTGCCCAG | GAATAAAGAA | TCGTGAACCT | GTTGCATGTT  | ATGTTTCAAC | GTGTTTATTT |
| 32641 | TTCAATTGCA | GAAAATTTCA | AGTCATTTTT | CATTCAGTAG  | TATAGCCCCA | CCACCACATA |
| 32701 | GCTTATACTA | ATCACCGTAC | CTTAATCAAA | CTCACAGAAC  | CCTAGTATTC | AACCTGCCAC |
| 32761 | CTCCCTCCCA | ACACACAGAG | TACACAGTCC | TTTCTCCCCG  | GCTGGCCTTA | AACAGCATCA |
| 32821 | TATCATGGGT | AACAGACATA | TTCTTAGGTG | TTATATTCCA  | CACGGTCTCC | TGTCGAGCCA |
| 32881 | AACGCTCATC | AGTGATGTTA | ATAAACTCCC | CGGGCAGCTC  | GCTTAAGTTC | ATGTCGCTGT |
| 32941 | CCAGCTGCTG | AGCCACAGGC | TGCTGTCCAA | CTTGCGGTTG  | CTCAACGGGC | GGCGAAGGAG |
| 33001 | AAGTCCACGC | CTACATGGGG | GTAGAGTCAT | AATCGTG CAT | CAGGATAGGG | CGGTGGTGCT |
| 33061 | GCAGCAGCGC | GCGAATAAAC | TGCTGCCGCC | GCCGCTCCGT  | CCTGCAGGAA | TACAACATGG |
| 33121 | CAGTGGTCTC | CTCAGCGATG | ATTCGCACCG | CCCGCAGCAT  | AAGGCGCCTT | GTCTCCGGG  |
| 33181 | CACAGCAGCG | CACCTTGATC | TCACTTAAGT | CAGCACAGTA  | ACTGCAGCAC | AGTACCACAA |
| 33241 | TATTGTTTAA | AATCCCACAG | TGCAAGGCGC | TGTATCCAAA  | GCTCATGGCG | GGGACCACAG |
| 33301 | AACCCACGTG | GCCATCATA  | CACAAGCGCA | GGTAGATTAA  | GTGGCGACCC | CTCATAAACA |
| 33361 | CGCTGGACAT | AAACATTACC | TCTTTTGGCA | TGTTGTAATT  | CACCACCTCC | CGGTACCATA |
| 33421 | TAAACCTCTG | ATTAAACATG | GCGCCATCCA | CCACCATCCT  | AAACCAGCTG | GCCAAAACCT |
| 33481 | GCCCGCCGGC | TATGCACTGC | AGGGAACCGG | GACTGGAACA  | ATGACAGTGG | AGAGCCCAGG |

FIG. 17A-13



|       |            |            |            |            |            |            |
|-------|------------|------------|------------|------------|------------|------------|
| 33541 | ACTCGTAACC | ATGGATCATC | ATGCTCGTCA | TGATATCAAT | GTTGGCACAA | CACAGGCACA |
| 33601 | CGTGCATACA | CTTCCTCAGG | ATTACAAGCT | CCTCCCGCGT | CAGAACCATA | TCCCAGGGAA |
| 33661 | CAACCCATTC | CTGAATCAGC | GTAAATCCCA | CACTGCAGGG | AAGACCTCGC | ACGTAACTCA |
| 33721 | CGTTGTGCAT | TGTCAAAGTG | TTACATTTCG | GCAGCAGCGG | ATGATCCTCC | AGTATGGTAG |
| 33781 | CGCGTGTCTC | TGTCTCAAAA | GGAGGTAGGC | GATCCCTACT | GTACGGAGTG | CGCCGAGACA |
| 33841 | ACCGAGATCG | TGTTGGTCGT | AGTGTCATGC | CAAATGGAAC | GCCGGACGTA | GTCATATTTT |
| 33901 | CTGAAGCAAA | ACCAGGTGCG | GGCGTGACAA | ACAGATCTGC | GTCTCCGGTC | TCGTCGCTTA |
| 33961 | GCTCGCTCTG | TGTAGTAGTT | GTAGTATATC | CACTCTCTCA | AAGCATCCAG | GCGCCCCCTG |
| 34021 | GCTTCGGGTT | CTATGTAAAC | TCCTTCATGC | GCCGCTGCCC | TGATAACATC | CACCACCGCA |
| 34081 | GAATAAGCCA | CACCCAGCCA | ACCTACACAT | TCGTTCTGCG | AGTCACACAC | GGGAGGAGCG |
| 34141 | GGAAGAGCTG | GAAGAACCAT | GTTTTTTTTT | TTTATTCCAA | AAGATTATCC | AAAACCTCAA |
| 34201 | AATGAAGATC | TATTAAGTGA | ACGCGCTCCC | CTCCGGTGGC | GTGGTCAAAC | TCTACAGCCA |
| 34261 | AAGAACAGAT | AATGGCATTT | GTAAGATGTT | GCACAATGGC | TTCCAAAAGG | CAAACCTGCC |
| 34321 | TCACGTCCAA | GTGGACGTAA | AGGCTAAACC | CTTCAGGGTG | AATCTCCTCT | ATAAACATTC |
| 34381 | CAGCACCTTC | AACCATGCCC | AAATAATTTT | CATCTCGCCA | CCTTATCAAT | ATGTCTCTAA |
| 34441 | GCAAATCCCG | AATATTAAGT | CCGGCCATTG | TAAAAATCTG | CTCCAGAGCG | CCCTCCACCT |
| 34501 | TCAGCCTCAA | GCAGCGAATC | ATGATTGCAA | AAATTCAGGT | TCCTCACAGA | CCTGTATAAG |
| 34561 | ATTCAAAAGC | GGAACATTAA | CAAAAATACC | GCGATCCCGT | AGGTCCCTTC | GCAGGGCCAG |
| 34621 | CTGAACATAA | TCGTGCAGGT | CTGCACGGAC | CAGCGCGGCC | ACTTCCCCGC | CAGGAACCAT |
| 34681 | GACAAAAGAA | CCCACACTGA | TTATGACACG | CATACTCGGA | GCTATGCTAA | CCAGCGTAGC |
| 34741 | CCCGATGTAA | GCTTGTTGCA | TGGGCGGCGA | TATAAAATGC | AAGGTACTGC | TCAAAAAATC |
| 34801 | AGGCAAAGCC | TCGCGCAAAA | AAGCAAGCAC | ATCGTAGTCA | TGCTCATGCA | GATAAAGGCA |
| 34861 | GGTAAGTTCC | GGAACCACCA | CAGAAAAAGA | CACCATTTTT | CTCTCAAACA | TGTCTGCGGG |
| 34921 | TTCTGCATA  | AACACAAAAT | AAAATAACAA | AAAAAAAAAA | ACATTTAAAC | ATTAGAAGCC |
| 34981 | TGTNTTACAA | CAGGAAAAAC | AACCCTTATA | AGCATAAGAC | GGACTACGGC | CATGCCGGCG |
| 35041 | TGACCGTAAA | AAAACCTGGT | ACCGTGATTA | AAAAGCACCA | CCGACAGTTC | CTCGGTCATG |
| 35101 | TCCGGAGTCA | TAATGTAAGA | CTCGGTAAAC | ACATCAGGTT | GGTTAACATC | GGTCAGTGCT |
| 35161 | AAAAAGCGAC | CGAAATAGCC | CGGGGGAATA | CATACCCGCA | GGCGTAGAGA | CAACATTACA |
| 35221 | GCCCCCATAG | GAGGTATAAC | AAAATTAATA | GGAGAGAAAA | ACACATAAAC | ACCTGAAAAA |
| 35281 | CCCTCCTGCC | TAGGCAAAAT | AGCACCTTCC | CGCTCCAGAA | CAACATACAG | CGCTTCCACA |
| 35341 | GCGGCAGCCA | TAACAGTCAG | CCTTACCAGT | AAAAAAACCT | ATTAAAAAAC | ACCACTCGAC |
| 35401 | ACGGCACCAG | CTCAATCAGT | CACAGTGTA  | AAAGGGCCAA | GTACAGAGCG | AGTATATATA |
| 35461 | GGACTAAAAA | ATGACGTAAC | GGTTAAAGTC | CACAAAAACC | ACCCAGAAAA | CCGCACGCGA |
| 35521 | ACCTACGCCC | AGAAACGAAA | GCCAAAAAAC | CCACAACCTC | CTCAAATCTT | CACTTCCGTT |
| 35581 | TTCCCACGAT | ACGTCACCTC | CCATTTTAAA | AAAAAACTAC | AATTCCCAAT | ACATGCAAGT |
| 35641 | TACTCCGCCC | TAAAACCTAC | GTCACCCGCC | CCGTTCCAC  | GCCCCGCGCC | ACGTCACAAA |
| 35701 | CTCCACCCCC | TCATTATCAT | ATTGGCTTCA | ATCCAAAATA | AGGTATATTA | TTGATGATG  |

FIG. 17A-14



| Animal    | Prime (Wk 0, 4, 26)           | Boost (Wk 56)                              | Pre               |                  | Prime <sup>b</sup> |     | Pre-Boost <sup>c</sup> |     | Post-Boost <sup>d</sup> |      |
|-----------|-------------------------------|--------------------------------------------|-------------------|------------------|--------------------|-----|------------------------|-----|-------------------------|------|
|           |                               |                                            | Mock <sup>a</sup> | Gag <sup>a</sup> | Mock               | Gag | Mock                   | Gag | Mock                    | Gag  |
| Monkey 1  | 10 <sup>9</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 18                | 16               | 1                  | 244 | 3                      | 74  | 3                       | 1235 |
| Monkey 2  | 10 <sup>7</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10                | 9                | 4                  | 83  | 0                      | 18  | 0                       | 856  |
| Monkey 3  | 10 <sup>9</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 1                | 0                  | 219 | 9                      | 69  | 0                       | 703  |
| Monkey 4  | 10 <sup>7</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 1                | 3                  | 59  | 1                      | 20  | 0                       | 419  |
| Monkey 5  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 3                 | 4                | ND <sup>e</sup>    | ND  | ND                     | ND  | 4                       | 558  |
| Monkey 6  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0                 | 3                | ND                 | ND  | ND                     | ND  | 1                       | 295  |
| Monkey 7  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 1                 | 9                | ND                 | ND  | ND                     | ND  | 9                       | 103  |
| Monkey 8  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 3                 | 3                | ND                 | ND  | ND                     | ND  | 1                       | 381  |
| Monkey 9  | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0                 | 6                | ND                 | ND  | ND                     | ND  | 0                       | 369  |
| Monkey 10 | none                          | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 15                | 5                | ND                 | ND  | ND                     | ND  | 10                      | 211  |

FIG. 18

| Animal   | Prime (Wk 0, 4, 26)           | Boost (Wk 56)                              | Gag-Specific T cells (Wk 60) |      |
|----------|-------------------------------|--------------------------------------------|------------------------------|------|
|          |                               |                                            | %CD4                         | %CD8 |
| Monkey 1 | 10 <sup>9</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.06                         | 0.37 |
| Monkey 2 | 10 <sup>7</sup> vp MRKAd5-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.01                         | 0.56 |
| Monkey 3 | 10 <sup>9</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.07                         | 0.06 |
| Monkey 4 | 10 <sup>7</sup> vp MRKAd6-gag | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 0.04                         | 0.20 |

FIG. 19

| Animal    | Prime (Wk 0, 4)                            | Boost (Wk 24)                 | Pre               |                  | Prime <sup>b</sup> |     | Pre-Boost <sup>c</sup> |     | Post-Boost <sup>d</sup> |      |
|-----------|--------------------------------------------|-------------------------------|-------------------|------------------|--------------------|-----|------------------------|-----|-------------------------|------|
|           |                                            |                               | Mock <sup>a</sup> | Gag <sup>a</sup> | Mock               | Gag | Mock                   | Gag | Mock                    | Gag  |
| Monkey 11 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 3                 | 4                | 3                  | 150 | 4                      | 28  | 0                       | 188  |
| Monkey 12 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 3                | 1                  | 753 | 4                      | 554 | 0                       | 1029 |
| Monkey 13 | 10 <sup>11</sup> vp Ad24ΔE1gagΔOrf6Ad5Orf6 | 10 <sup>7</sup> vp MRKAd5-gag | 1                 | 9                | 4                  | 273 | 0                      | 370 | 0                       | 1520 |
| Monkey 14 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 0                | ND <sup>e</sup>    | ND  | ND                     | ND  | 4                       | 94   |
| Monkey 15 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 0                 | 0                | ND                 | ND  | ND                     | ND  | 1                       | 168  |
| Monkey 16 | none                                       | 10 <sup>7</sup> vp MRKAd5-gag | 8                 | 3                | ND                 | ND  | ND                     | ND  | 8                       | 149  |

FIG. 20